

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
CALIFORNIA TRAFFIC CONTROL DEVICES COMMITTEE (CTCDC)

MEETING OF THE  
CALIFORNIA TRAFFIC CONTROL DEVICES COMMITTEE

CALIFORNIA STATE UNIVERSITY SAN BERNARDINO  
PALM DESERT CAMPUS  
37-500 COOK STREET  
ROOM IW120  
PALM DESERT, CALIFORNIA

THURSDAY, MARCH 21, 2013

9:00 A.M.

Reported by:  
Martha L. Nelson

APPEARANCES

MEMBERS

Michael Robinson, Chair

Devinder Singh, Secretary

Mark Greenwood

Emma Olenberger

Hamid Bahadori, ACSC

Janice Benton

Lt. David Ricks

Jeff Knowles, League of California Cities

Rick Marshall

Bryan Jones

ALSO PRESENT

Jan Harnik, Mayor, Palm Desert

Zhongren Wang, CT, HQ, Ramp Metering Chief

Stephen Pyburn, Federal Highway Administration

Johnny Bhullar, Caltrans, Science Branch Chief

John Fisher

David Royer, Consulting Traffic and Highway

Chad Dornsife, Best Highway Safety Practices Institute

Sam Morrissey, City of Santa Monica

Jim Baross, California Association of Bicycling Organizations

Rock Miller, Alternate Member

Jason Patton, City of Oakland

APPEARANCES (CONTINUED)

ALSO PRESENT (CONT.)

David Kemp, Active Transportation Coordinator, City of Davis

Zaki Mustafa, LODOT, Executive Officer

Sze-Lei Leong, Metropolitan Transportation Commission

Don Howe, Caltrans

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PROCEEDINGS BEGIN AT 9:06 A.M.

(The meeting was called to order at 9:06 a.m.)

PALM DESERT, CALIFORNIA, THURSDAY, MARCH 21, 2013

MEETING BEGINS AT 9:06 A.M.

CHAIR ROBINSON: I'll open the March 21st meeting of the California Traffic Control Devices Committee to order. We've got beautiful facilities. We've got a beautiful town that we're -- that we're meeting in this time. I can not believe the weather that -- that Mark Greenwood ordered up for us.

COMMITTEE MEMBER GREENWOOD: I ordered it special.

CHAIR ROBINSON: And Mark has a special introduction for us, Mayor Jan Harnik. Good morning.

MAYOR HARNIK: Well, yeah, good morning. And did you want to --

COMMITTEE MEMBER GREENWOOD: No.

MAYOR HARNIK: Oh.

COMMITTEE MEMBER GREENWOOD: I just wanted to --

MAYOR HARNIK: Oh.

COMMITTEE MEMBER GREENWOOD: -- introduce the mayor. We are happy to have you here.

MAYOR HARNIK: Well, we do, on behalf of the city council and, of course, on our whole -- our community, we do want to welcome you all. And when Mark first asked me if I'd say some welcoming remarks I thought -- he said this is the

1 best looking, most efficient committee that has ever been  
2 hosted by Palm Desert, so that was nice of him. But at first I  
3 said why March, why Palm Desert? And then I realized that why,  
4 this is no coincidence that you've scheduled your meeting here.  
5 I'm looking around, and this is the heart of Fashion Week El  
6 Paseo where we celebrate all things fashionable and fabulous.  
7 So thank you for being here.

8           Seriously, I'm sure I'll see you all tonight front  
9 row at the couture designer show.

10           CHAIR ROBINSON: Well, of course.

11           MAYOR HARNIK: I'm sure of it.

12           But on another note, I really -- I do serve on the  
13 RCTC, so I do appreciate what you do. And I particularly  
14 appreciate the local input to our decision makers in  
15 Sacramento, and Caltrans. We need it. We want to make sure  
16 our kids get to school safely. We want to get to work on time,  
17 mostly. And certainly, we have tourism-based economy. And we  
18 want to make sure that we have our tourists here with no really  
19 inefficient type of driving conditions. So we really do  
20 appreciate it.

21           When I found out this was mostly engineers, I have  
22 only -- I read Dilbert every day. But other than that I have  
23 only so much contact with engineers. Now, my husband is a  
24 lawyer. He shares a lot of the same traits as engineers. I  
25 do, in fact, upon occasion call him OCD boy. Never mind what

1 he calls me. But I really think it would be CDO boy, because a  
2 true OCD would alphabetize those letters.

3 But at any rate, I do appreciate all that you do.  
4 You're selfless. You really do pursue excellence. And it  
5 comes across in -- in our city. And we look forward to you  
6 coming back, and we look forward to welcoming you back. So I  
7 hope you appreciate all that we have to offer here, and have a  
8 great time.

9 And thank you, Mark, for inviting me today.

10 COMMITTEE MEMBER GREENWOOD: Thank you.

11 CHAIR ROBINSON: Thank you so much, Mayor.

12 MAYOR HARNIK: Thank you. And I'm going to scoot  
13 out. I have another thing I have to do for Fashion Week, so  
14 hopefully related.

15 CHAIR ROBINSON: Thank you. Okay. I think we'll go  
16 ahead and introduce the committee. Why don't we go ahead and  
17 start down here on my left with Mark.

18 COMMITTEE MEMBER GREENWOOD: I'm Mark Greenwood. I'm  
19 the Director of Public Works for the City of Palm Desert here.  
20 I'm the League of California Cities' representative for  
21 Southern California.

22 COMMITTEE MEMBER OLENBERGER: I'm Emma Olenberger  
23 with AAA Northern California.

24 COMMITTEE MEMBER BENTON: I'm Janice Benton with  
25 Caltrans and the Program Manager for the Office of Traffic

1 Engineering.

2 SECRETARY SINGH: Devinder Singh, Secretary for the  
3 committee.

4 CHAIR ROBINSON: I'm Mike Robinson. I am from the  
5 County of San Diego, and I am the Southern California  
6 representative of CSAC.

7 COMMITTEE MEMBER RICKS: David Ricks with the  
8 California Highway Patrol.

9 COMMITTEE MEMBER BAHADORI: Hamid Bahadori,  
10 Automobile Club of Southern California.

11 COMMITTEE MEMBER KNOWLES: Jeff Knowles, Traffic  
12 Engineer for the City of Vacaville. And I represent the League  
13 of California Cities North.

14 COMMITTEE MEMBER MARSHALL: I'm Rick Marshall from  
15 the County of Napa, representing Northern Counties.

16 COMMITTEE MEMBER JONES: My name is Bryan Jones and  
17 I'm the Deputy Transportation Director for the City of  
18 Carlsbad. And I am appointed on this committee to represent  
19 bicycles and pedestrians.

20 CHAIR ROBINSON: Okay. Why don't we go ahead and go  
21 out into the audience.

22 (Whereupon off-mike audience introductions were made and  
23 not transcribed.)

24 CHAIR ROBINSON: Okay. That's -- now that we're all  
25 friends and know who each other we have -- I'm going to call



1 him a special guest today, because this is his last meeting  
2 with us, Jeff Knowles who has been on the committee or filling  
3 in with the committee for at least six years, he's retiring.  
4 This is -- tomorrow is his last day of work, and then he gets  
5 to go and play.

6 COMMITTEE MEMBER KNOWLES: That's right.

7 CHAIR ROBINSON: Jeff, we've got a plaque for you,  
8 and I'd like to -- I'd like to read it. Let's see if I can do  
9 it without my glasses, Jeff.

10 Jeff Knowles, March 21st, 2013, in recognition of six  
11 years of dedicated and professional service to road users  
12 in the State of California as a representative of the  
13 League of California Cities. Your commitment to traffic  
14 safety and uniformity of traffic control devices has been  
15 an inspiration to the profession. Your contribution  
16 during the adoption of the 2010 and 2012 California Manual  
17 on Uniform Traffic Control Devices was invaluable. And  
18 your wisdom helped to develop a very comprehensive  
19 product. On behalf of Caltrans and CTCDC members, we want  
20 to thank you for your outstanding service to the CTCDC.  
21 Committee Alternate Member 2007 to 2009, Committee Vote  
22 Member 2009 to 2013."

23 Jeff --

24 COMMITTEE MEMBER KNOWLES: Thank you. Very much.

25 CHAIR ROBINSON: -- we're going to miss you. We're

1 going to miss you.

2 COMMITTEE MEMBER BAHADORI: How about some words of  
3 wisdom?

4 COMMITTEE MEMBER KNOWLES: I ran out of them last  
5 night at dinner. But for all those in the audience or those  
6 that may read the minutes, I certainly all traffic engineers to  
7 be involved with this committee. There's plenty of empty seats  
8 that will show in the minutes for more local traffic engineers  
9 to have attended this meeting and provided us with the input on  
10 rules and regulations which will affect your everyday  
11 operations in your local jurisdictions. So since I know we  
12 have verbatim minutes these days I'll get that in there. So I  
13 highly encourage more participation in this committee. It's --  
14 a lot of things, a lot of good things happen here, and you can  
15 prevent some disasters also by providing input. Thank you very  
16 much.

17 CHAIR ROBINSON: Thank you, Jeff. Those are wise  
18 words.

19 COMMITTEE MEMBER JONES: Why don't you stand up with  
20 your plaque so we can get a picture there. There we go.  
21 Perfect. Thanks.

22 CHAIR ROBINSON: And I will take that as  
23 encouragement for us to try and get additional people into our  
24 meetings. I think we need to put a little bit more energy into  
25 that ourselves. Okay.

1 I'm supposed to tell everybody where the restrooms  
2 are, and they're -- and I don't know where they are.

3 SECRETARY SINGH: Just behind us.

4 CHAIR ROBINSON: Just behind us. Okay.

5 And then we've got minutes to adopt. Has everybody  
6 read the minutes? Are there -- they're -- they're pretty  
7 voluminous. Do we have -- if everybody has nodded in the  
8 correct direction, I would entertain a motion to approve the  
9 minutes.

10 COMMITTEE MEMBER MARSHALL: Mr. Chairman, I'll move  
11 approval.

12 CHAIR ROBINSON: Rick Marshall moves approval. And  
13 do we have a second?

14 COMMITTEE MEMBER KNOWLES: Second.

15 CHAIR ROBINSON: Second by Jeff Knowles. All in  
16 favor of approving the minutes, raise your hand. Opposed,  
17 raise your hand. The motion carries unanimously. Thank you.

18 Now I would entertain any motions to take any of our  
19 actions out of order. Seeing none, we'll go ahead and get into  
20 our first item.

21 SECRETARY SINGH: Public comments.

22 CHAIR ROBINSON: Oh, we've got public comments.  
23 Thank you.

24 Members of the public, this is your opportunity to  
25 come and address the committee.

1           Seeing none, we'll move on to agenda item number one.  
2 This is a public hearing.

3           SECRETARY SINGH: It's amended.

4           CHAIR ROBINSON: Oh, it's amended. Okay. Thank you.

5           Item 13-05, proposal to amend Section 2C.37 and 4I.03  
6 and -- of the California Manual of Traffic Control -- Uniform  
7 Traffic Control Devices 2012, to add Activated Blank-Put Meter  
8 On and Prepare to Stop sign. This is submitted by Caltrans.

9           Janice, do you have a report on that?

10          COMMITTEE MEMBER BENTON: Yes. So Caltrans is  
11 requesting that the committee recommend the adoption of the  
12 amendment to Section 2C.37 and Section 4I.03 as proposed in the  
13 included mock-up information. The agenda item has been  
14 presented.

15          I want to introduce Zhongren Wang. He is the program  
16 manager for our ramp metering program in Caltrans, and he'll  
17 present the topic.

18          Zhongren?

19          MR. WANG: Good morning, Mr. Chairman, Mr. Secretary,  
20 and good morning CTCDC Members.

21          My name is Zhongren Wang and I work for Caltrans  
22 Headquarters Ramp Metering Branch, and I'm the Branch Chief.  
23 And today I just want to, you know, share with you some of the  
24 backgrounds, you know, of our proposal here.

25          And basically, like Mr. Chairman mentioned, you know,

1 we proposed to amend Section 2C.37 and 4I.03 to incorporate the  
2 Meter On sign, and also Prepare to Stop. That's the activated  
3 blank-out sign. I will refer them as ABO signs, activated  
4 blank-out.

5           These signs in California, we use activated -- ABO  
6 signs ABO signs as, you know, as -- in our on ramps, you know,  
7 to provide the advanced warning for the motorists. You guys  
8 have seen there, if you drive, you know, before you get onto  
9 the freeway, you know, before you hit the red meter you will  
10 have to see the first sign is a little -- a little sign like a  
11 ped-head signal sign; right? That's the Meter On sign. And  
12 then when the meter is on the thing is blinking; right? So it  
13 just provides, you know, the public advanced warning for them.  
14 Okay. So that's one of the Meter On signs, we call it. That's  
15 one of the advanced warning signs.

16           And then for connector metering, if you guys drive in  
17 the L.A. area, you know, you are going to see connector meters,  
18 a lot of our connector -- freeway connector meter. And then we  
19 also have those type of bigger signs mounted on the mast arms,  
20 also called Meter On sign.

21           Yeah, Don, if you can show -- yeah. See that?  
22 That -- the first one is the ped-head Meter On activated blank-  
23 out sign. We display the message "Meter On." Thank you.  
24 Right.

25           And then typically it's planned -- this thing is

1 installed at the entrance score area, really limited space  
2 area, you know, we use a ped-head mount and then the eye-  
3 catching. So we have -- statewide we have about 2,000  
4 locations of this type of Meter On signs. And it has been used  
5 over the last decades, several decades, you know, with little  
6 public complaint. All right. So that's one type of Meter On  
7 sign.

8           And this is another type of Meter On sign that's for  
9 connector-to-connector metering use to provide the advanced  
10 warning purpose. And also, so we have -- sometimes we have the  
11 route number there, we post it, like 210-wise, and sometimes we  
12 don't have the route number posted. So that's why we have  
13 three different types of Meter On signs. Meter On ped-head  
14 sign, and Meter On mast arm, and sometimes we'll have specific  
15 route number there. All right. So three types of Meter On  
16 signs.

17           And also we have further -- we have Prepare to Stop.  
18 That's also further down. Yeah, there we go. That's the  
19 Prepare to Stop. Also, called activated blank-out signs, you  
20 know? That's after you see the Meter On sign and we alert the  
21 motorists, you know, Prepare to Stop, because of the presence  
22 of something huge; right?

23           So all these are necessary elements for ramp metering  
24 operations. And other signs has been mentioned in 2011 -- in  
25 year 2011 in the 2011 version of the California MUTCD. It has

1 been mentioned in 2C.37 and also 4I.03. However, at that time  
2 we didn't put in the thumbnail graphics, or you guys called  
3 them mock-ups. At that time we didn't incorporate that into  
4 it.

5           So this time, you know, we want to propose that we  
6 want to incorporate the -- we want to incorporate the Meter On  
7 sign, the four signs; right? Every sign we give it a little  
8 mock-up and then put it in the California MUTCD. And also, we  
9 want to amend, accordingly, Section 2C.37; you see that  
10 amendment there, you know? And we called it -- previously we  
11 called it internally illuminated sign. But now we want to, you  
12 know, standardize the verbiage. You know, we want to call it  
13 Activated Blank-Out Meter On sign. And at the time we want to  
14 assign them some sign codes, basically sign numbers, so that we  
15 can follow-up, you know, to do our sign specifications, you  
16 know, refer to the same number. All right.

17           So basically that's our proposal there. You know, we  
18 want to update these two sections, 2C.37 and 4I.03. So we want  
19 to incorporate the -- the mock-ups into MUTCD. And also we  
20 want to assign a sign number for all these signs. Okay. So  
21 this is our proposal there. We know that currently the Meter  
22 On sign at every onramp, you know, it's white colored. So --  
23 and then we want to -- right now we want to change it to amber  
24 colored, so to follow the new MUTCD standard. In fact, all  
25 these signs has been in existing for decades and really pre-

1 exist the California MUTCD. All right. So that's why we want  
2 to change that.

3           And also specifically the letter size, you know, the  
4 letter size right now is four-and-a-half inches. Okay.  
5 It's -- it meets the minimum standards for the -- for the  
6 MUTCD, the National MUTCD. The minimum is four inches. All  
7 right. So this is the Meter On sign. We already kind of  
8 prepared the dimensions. But the sign number, later on we are  
9 going to assign it. We'll assign a different sign number for  
10 them, all right, just to consistency.

11           Anyways, this is one. This is the second Meter On  
12 sign. And this is the third one with the specific log number.  
13 And then, see, that way we kind of put -- put all the maximum  
14 number of letters, you know, out there, 710 South, probably  
15 that's the maximum number of route to have.

16           And then the last one will be the Prepare to Stop  
17 sign.

18           Okay, so just in summary, we proposed to incorporate  
19 these four signs into the current California MUTCD so that we  
20 can further prepare our California manuals and standard plans  
21 and sign specifications. Thank you.

22           CHAIR ROBINSON: Thank you. Now, one thing that I  
23 haven't mentioned is the way that we're going to go about these  
24 reports is we'll take the report from Staff or whoever is  
25 giving it. We'll bring the item into the committee for



1 discussion. Once we're done with an initial discussion we'll  
2 ask the audience if there's any -- for their participation.  
3 Once we're done with the audience commentary, then we'll bring  
4 it back into the committee. And hopefully by then we'll --  
5 we'll have enough information to make a decision on that.

6           So thank you very much, and I'll bring it into the  
7 committee for discussion, thoughts. My initial thought is,  
8 obviously, the Meter On sign is going to be used by Caltrans.  
9 I don't -- I can't think of anybody else that would be using a  
10 Meter On sign, so I've got no particular issues with that.

11           Prepare to Stop signs are -- are scenarios where  
12 agencies may choose to use those. In fact, I've installed them  
13 in advance of traffic signals where visibility was -- was  
14 difficult. So that would be the one area that -- that maybe  
15 we'd want to take a look at. Is there any -- are there any  
16 concerns? I didn't have a concern with what was there. But I  
17 could imagine that there would be -- there's a possibility of  
18 other designs than just what was shown on the -- on the mast  
19 arm.

20           COMMITTEE MEMBER BAHADORI: Mr. Chairman, I think  
21 this sign, as the speaker -- Staff mentioned, these have been  
22 in existence for decades, at least a couple of decades, since  
23 we started doing ramp metering in late '80s. They're well  
24 known to the motorists. I don't see why we should tinker  
25 around with it.

1 CHAIR ROBINSON: Sounds good.

2 COMMITTEE MEMBER BAHADORI: Let's just approve it as  
3 is.

4 CHAIR ROBINSON: Any other thoughts?

5 COMMITTEE MEMBER RICKS: I'd have to agree on that.  
6 We've had these signs in place for quite some time and they  
7 work well. They're advantageous to the motorists to give them  
8 a heads-up that the meter is on at the beginning of the ramp.  
9 It's going to prevent any traffic conflicts, that if someone  
10 doesn't know if the meter is on, traveling down what could be a  
11 shoulder at that time of day. If they have the Meter On sign  
12 they'll see that and realize that it is an active meter at that  
13 point.

14 COMMITTEE MEMBER BAHADORI: Chairman, I have one  
15 quick question. The policy is not retroactive. You are not  
16 going to change the color of LED on the existing signs, are  
17 you?

18 MR. WANG: No.

19 COMMITTEE MEMBER BAHADORI: No. It's only for future  
20 signs?

21 MR. WANG: Yes.

22 COMMITTEE MEMBER BAHADORI: Okay.

23 CHAIR ROBINSON: All right. We'll open it up to the  
24 audience. Comments? And when you get there would you please,  
25 when you address the committee, identify who you are. You're

1 limited to five minutes, Steve. And anybody wishing to discuss  
2 any other items, we'll give you opportunity later to do that.

3 Steve, go ahead.

4 MR. PYBURN: All right. Steve Pyburn, Federal  
5 Highway Administration. And I have to apologize, that I'm the  
6 reason that this item is before you today. I was asked to  
7 review the Ramp Meter Design Manual where the sign was being  
8 converted. I -- there was something -- some issue with the  
9 figure.

10 And the problem I had with the sign initially is the  
11 white color is a regulatory message -- a regulatory color, but  
12 the message is a warning. There's some incontinuity there.

13 So I looked, thinking of the sign, and what the  
14 requirements for signs are, I noticed in the manual there's no  
15 requirements for blank-out signs. A number of places there's  
16 blank-out signs that says you can use a blank-out sign, for  
17 example, a No Left Turn, but there's no dimensions or use or  
18 other guidance. And that's all right if the sign defaults back  
19 to the -- the standard design of the particular sign in symbol,  
20 color, spacing, sign size, etcetera. But nowhere does it say a  
21 blank-out sign has to meet those dimensions, but it is implied.

22 The other issues I have with the existing sign are  
23 the size, in addition to the color is the size. It's 12 inch  
24 by 15 inch. And the letter height, it's all right. Spacing  
25 around the border is only three-quarter inch -- or spacing

1 between the words is three-quarter inch and the border is five-  
2 eighths of an inch. So I looked at the other warning signs in  
3 the Standard Highway Signs book. And a regular diamond-shaped  
4 sign, four inch letter height is the minimum; 24 inch on the  
5 side is okay. The letter spacing is three inches. Again, we  
6 have here three-quarters of an inch.

7           So I looked at some warning signs that are  
8 rectangular. And there's only two in the Standard Highway  
9 Signs book. And those are, I think 42 by 66. So I didn't look  
10 at the letter height on those. But the ones that are  
11 rectangular are plaques, and their sub-plaques are  
12 supplemental. And just as an example, a W73AP, which is a  
13 plaque that would say Next 7 Miles or so for like under a curvy  
14 road sign, the minimum size of that sign is 25 by 18. This is  
15 15 by 12. The letter height, three-and-a-half, so we're okay  
16 there. The spacing on that sign, three inches. And the border  
17 on that sign, three-and-a-half inches. So five -- so five  
18 requirements for this sign, color, size, letter height, spacing  
19 and border, you've got 2 out of 5, 40 percent.

20           The -- I appreciate the -- I appreciate the change of  
21 color, since it is a warning message. I would recommend this  
22 wording be only put in Chapter 2 in some form because this is  
23 not a signal; this is a sign.

24           And I may not come to agreement with Caltrans on this  
25 issue. I'm going to defer it to my headquarters. I'm going to

1 send it to our sign guy in Washington. If he has a problem  
2 with it he has a problem with it, and I'll bring that message  
3 back to Caltrans. I've -- I've noted my concerns to Caltrans.  
4 I appreciate Zhongren bringing the item here today at my  
5 insistence. But I don't agree with the size or the spacing of  
6 the sign, and so I'll defer it to our headquarters.

7           If our headquarters says, yes, fine, if our  
8 headquarters says, no, and the sign is incorporated in the  
9 manual, we wouldn't find that in substantial conformance.  
10 Usually substantial conformance is deferred to the division  
11 office. And only in one case that I've seen our headquarters  
12 has made a determination of substantial conformance, and  
13 they're not supposed to do that, and I've asked them not to do  
14 it. But in this case I need another opinion because we don't  
15 agree. So I'm going to defer it to a more broader set of  
16 opinion.

17           Thank you for your time. If you have any  
18 questions --

19           COMMITTEE MEMBER BAHADORI: Mr. Chairman?

20           CHAIR ROBINSON: Go ahead.

21           COMMITTEE MEMBER BAHADORI: So -- so does the Federal  
22 MUTCD have a standard for these blank-out signs?

23           MR. PYBURN: No.

24           COMMITTEE MEMBER BAHADORI: Okay. So you don't have  
25 it. Now, why would the -- why would the fraction of an inch

1 requirement on a static sign be necessarily required for a sign  
2 that's so different in nature? Because it's an activated LED  
3 sign and, in most cases, even flashing, which is much more  
4 visible. I understand the need for consistency and conformity  
5 on all signs. But in this case are those -- that -- is that  
6 level of detail really that detrimental to the visibility of  
7 the sign or its effectiveness?

8 MR. PYBURN: Yes. Why is letter height important?  
9 Why is spacing important?

10 COMMITTEE MEMBER BAHADORI: No, no. That -- no, no,  
11 no, no. The letter height --

12 MR. PYBURN: Why is the spacing of letters important?

13 COMMITTEE MEMBER BAHADORI: The letter height, I  
14 completely agree with you, is very, very important. And the  
15 letter height, they're actually exceeding the three-and-a-half.  
16 They are four inches. So -- but why would like those other  
17 like border clearances and things like that, edge clearances,  
18 why would that be so critical in the visibility and  
19 effectiveness of the blank-out LED flashing sign?

20 MR. PYBURN: It's critical for this sign, as it is  
21 for every other sign, is that's to clearly distinguish the two  
22 sets of lines of letters. Put this sign in the dark when it's  
23 raining and a windshield with water on it or a little fog on  
24 it, and you have a white flashing -- the letters get blurred.  
25 That's from personal experience. I know what the sign says.

1 And when it's flashing at that location on a ramp I know it  
2 says Meter On. Just from personal experience, about three  
3 months ago in the rain the letters were not clear. So why  
4 is -- why is there separation of letters on any sign? Clarity  
5 of the message. It needs to be recognizable immediately.

6 In addition, these signs are typically put -- in the  
7 ramp design manual says they have to be put in a place where  
8 they can be seen by oncoming traffic. I don't particularly  
9 agree with that requirement but, okay, if Caltrans wants to do  
10 it that way, that's fine. It's not an issue for me. I just,  
11 as a traffic engineer, I have a problem with it. Because if  
12 you're making a left turn on an non-signalized approach -- non-  
13 signalized intersection to a ramp you've got these -- these  
14 signs. You've got other warning signs. You've got oncoming  
15 traffic. There's locations on arterials, on interchanges where  
16 there's enough clutter that these signs can be overlooked.

17 COMMITTEE MEMBER BAHADORI: Mr. Chairman? Mr.  
18 Chairman?

19 CHAIR ROBINSON: Yes?

20 COMMITTEE MEMBER BAHADORI: Why does then Caltrans  
21 want to stay with their proposed design and not accommodate the  
22 changes? Because the new standard is not going not be  
23 retroactive. Whatever sign you have out there is going to stay  
24 out there. It applies only to future signs that you are going  
25 to order.

1 CHAIR ROBINSON: So the -- the issue that we're  
2 creating is if there were a change then it would be -- there  
3 would be a wholesale change out. That's not happening.

4 COMMITTEE MEMBER BAHADORI: No, we do. We do.

5 CHAIR ROBINSON: What's there is there.

6 COMMITTEE MEMBER BAHADORI: No. We do that all the  
7 time.

8 COMMITTEE MEMBER BENTON: Well, can I -- can I answer  
9 part of that question? Mainly is they -- when they came up  
10 with the Meter On sign they came up with something that was  
11 available and used, and there were slight modifications. So we  
12 kept using that, that ped-head. This change -- this does  
13 change it a little bit, so there are some modifications to an  
14 existing product that's out there and easily available. It  
15 would require some additional specs, different manufacturing of  
16 the product, and so forth. So -- so there is -- there is  
17 advantages to just keeping with the same -- the same unit with  
18 modifications within that -- that particular unit.

19 COMMITTEE MEMBER BAHADORI: So -- so again, so that I  
20 understand, the standard is not going to be retroactive.  
21 You're not going to touch anything. The whites are going to  
22 stay white, even if they're small they're going to stay small.  
23 But for future, since the manufacturer has to do a new LED,  
24 they have to do yellow LED instead of white, why can't they  
25 also change the dimension and make the dimensional changes? Do



1 you -- do you have --

2 COMMITTEE MEMBER BENTON: Well --

3 COMMITTEE MEMBER BAHADORI: -- inventory of signs or  
4 you order?

5 COMMITTEE MEMBER BENTON: For -- for the -- for the  
6 one that's using the -- the ped-head, what we'll refer to as  
7 the ped-head, that's using an existing unit. Within that unit  
8 we're making modifications. If we make that change it would be  
9 a wholesale change to the product itself, or the unit. So  
10 that's what I'm referring to, that -- that -- that change.

11 COMMITTEE MEMBER BAHADORI: So the whole box has to  
12 change and everything?

13 COMMITTEE MEMBER BENTON: Correct.

14 COMMITTEE MEMBER KNOWLES: Mr. Chairman?

15 CHAIR ROBINSON: Jeff?

16 COMMITTEE MEMBER KNOWLES: So I have a question for  
17 the speaker. So, you know, since we're using letters that are  
18 larger than the minimum, would your preference to be for us to  
19 shrink the size of the letters to create greater space?  
20 Because we really do like that economy of scale, to be able to  
21 reuse an existing product rather than having to fabricate, you  
22 know, a custom head for the Meter On signs. So is your  
23 preference for us to shrink the letters to the minimum so the  
24 space between the words becomes greater?

25 MR. PYBURN: You could, if you took that sign and put

1 two four-inch letters on there, then you would pick up an inch  
2 -and-a-half, you could increase the spacing to about two-and-a-  
3 quarter inches. You have -- it might be more palatable that  
4 way.

5 COMMITTEE MEMBER KNOWLES: I mean, would you  
6 oppose -- you're -- you spoke of your disagreement before.  
7 Would that be --

8 MR. PYBURN: It's -- it's an improvement, yes.

9 COMMITTEE MEMBER KNOWLES: So -- so there -- since  
10 you're re-fabricating the -- the LED circuit board to provide  
11 yellow, if you just redesigned it with that greater spacing you  
12 could still use the ped-heads.

13 COMMITTEE MEMBER BENTON: I would have to refer to --

14 CHAIR ROBINSON: I think it's very understandable,  
15 the desire to stay within the shape of the ped-head.

16 COMMITTEE MEMBER BENTON: Yeah.

17 CHAIR ROBINSON: A change in the -- in the letter  
18 size, if -- if it garners agreement, then -- then I would be  
19 agreeable to that, as well.

20 COMMITTEE MEMBER BENTON: Well, and the only --

21 CHAIR ROBINSON: But I haven't heard Steve say that.

22 COMMITTEE MEMBER BENTON: Yeah, and I agree. I think  
23 that would be something -- I don't think we can make that  
24 commitment today. However, I just want to bring it up again  
25 that the National MUTCD doesn't have the guidance for this.

1 Therefore, it doesn't fall under that substantial conformance  
2 umbrella. So -- but by all means, we do need to make sure  
3 that, you know, our Federal Highways' partners are satisfied  
4 with the signs we're putting in the California MUTCD.

5 MR. PYBURN: Well, the National MUTCD does have  
6 requirements for letter height, spacing, border and sign size,  
7 an color.

8 MR. WANG: Right. But one important thing, Steve,  
9 you know, if I may, because a meter right now is four-and-a-  
10 half inches. So the height --

11 COMMITTEE MEMBER BENTON: You've got to be by the  
12 microphone.

13 COMMITTEE MEMBER KNOWLES: Yeah. You need to get  
14 close to the microphone for the minutes.

15 MR. PYBURN: Speak into the recorder -- microphone.

16 MR. WANG: Sorry. This is Zhongren Wang again. I'll  
17 just try to respond a little bit to what Steve has proposed.  
18 You know, everybody know that this -- this is off-the-shelf  
19 product. You know, it would be very hard to change. You know,  
20 if you switch to another box, that means millions of dollars  
21 new investment there; right? So that's why we kind of -- kind  
22 of quadrant in that sense.

23 When Steve is talking about, you know, when you have  
24 frost, fog, you know, windshield anything, you know, but  
25 remember he mentioned he still understands what's going on.

1 But, you know, he's just talking about the border, and also the  
2 spacing, you know, a little bit hard to see. But still he says  
3 he has no problem understanding what is being displayed. And  
4 in the current design there, you know, we emphasized the On,  
5 because the meter, you know, I would say just from my own  
6 experience, you know, the meter there, we know it's there, you  
7 know? The On lights keep on blinking, you know, and that's  
8 eye-catching. As long as we have provided the motorists with  
9 enough attraction, I would say this one has served its purpose.  
10 And by our judgment I would still say it's working fine.

11 COMMITTEE MEMBER BAHADORI: Mr. Chairman --

12 CHAIR ROBINSON: Go ahead.

13 COMMITTEE MEMBER BAHADORI: -- can I ask a question,  
14 but maybe from the FHWA rep? All the states that I have  
15 traveled through, they pretty much all have ramp metering for  
16 their freeways. So how come Federal Manual doesn't have a  
17 standard for them yet?

18 MR. PYBURN: We don't have a standard for that sign.  
19 We have a Meter On When Flashing sign. There's other ways  
20 to -- there's other ways to solve the problem. In fact --

21 COMMITTEE MEMBER BAHADORI: But I've seen similar  
22 sign that they use in California and other places.

23 MR. PYBURN: I would suggest that those are out of  
24 conformance with the National Manual, as well. You know, when  
25 these signs first started being used blank-out signs weren't

1 available. Blank-out signs are now an off-the-shelf product,  
2 as well. If they're -- I don't know if they're lighter, if the  
3 mounting requirements are different, if they could go on the  
4 same sign. I'm -- I make the observation that this sign  
5 doesn't meet the federal requirements.

6           And again, I'm willing to defer to our headquarters  
7 for their opinion. And I would -- I would even say take the  
8 current sign, and the sign with the four-inch letters and the  
9 increase spacing, you would sacrifice on the borders, and I  
10 would put them of them in front of them. And if our  
11 headquarters says both of them are okay then we don't have to  
12 go to the other letter size. They might say that the four-inch  
13 letter size with the increased spacing is -- is more  
14 preferable, and that would be fine too. Or they might say that  
15 they don't like either of them; go with what the fed has.

16           I will -- I will admit that Federal Highway has been  
17 a little, unfortunately, inconsistent on this exact issue of  
18 how to advise of ramp Meter On signs. They published a  
19 document that says they like the Signal Ahead sign. But when  
20 Zhongren asked if they could use that sign my headquarters  
21 said, no. I disagree with them. Can I get them to change  
22 their opinion? Perhaps. Because I would support that Signal  
23 Ahead sign. But there -- but there is a sign that is  
24 appropriate for this situation.

25           COMMITTEE MEMBER BAHADORI: Thank you.

1 CHAIR ROBINSON: Thanks. Johnny?

2 MR. BHULLAR: Johnny Bhullar with Caltrans, editor  
3 for California MUTCD. This is a nice discussion. And I would  
4 like to point out that, actually, if it had been done  
5 originally the way we worked when we were working on the ramp  
6 making design manual and placing everything into the California  
7 MUTCD, this would have been grandfathered in no problem.  
8 However, when we were doing that, some of these electronic  
9 signs we felt were not incorporated into the California MUTCD.  
10 And now that it has come under review these issues have come  
11 up, and of course we are willing, like Zhongren said, we are  
12 willing to not only include it in the manual, but also make  
13 sure that now it meets the criteria.

14 However, I do disagree with Steve Pyburn on a few --  
15 a few of the issues. First of all, the letter height, no  
16 arguments there. The minimum letter height of four inches  
17 here, it's not. Once we get into the shape, rectangular versus  
18 diamond, so the feds or FHWA and the National MUTCD does not  
19 have this device. California and Caltrans has this device,  
20 probably for 30-plus years. And at that time that was the  
21 technology that was available. But now, even looking at it,  
22 FHWA is asking California through these comments to basically  
23 design the sign that -- that is not there.

24 So what we are trying to do here is looking at the  
25 shape. Rectangular or square shaped is allowed for warning

1 signs. And, of course, a diamond as a blank-out in this case  
2 wouldn't really be appropriate. So for those reasons,  
3 rectangular, as well as square shapes for warning signs has  
4 precedence. So this is okay as per the shape.

5           The top being the color, yes, the color we did look  
6 at, this being a white light or white color and making it  
7 regulatory. However, the message was primarily warning. So we  
8 do thank FHWA for that, and looking at we agree. So that's why  
9 we changed the color. So we agree on the color, changing the  
10 color issue.

11           Once you talk about the spacing, the inter-line  
12 spacings, the way the manual reads is that it has to be as per  
13 the standard of signs book. This sign is not in the standard  
14 of a sign book. So how can that, first of all, apply?

15           Secondly, the manual contains shall, should, may --  
16 and may, meaning that in those cases it's very clear where your  
17 flexibility, where Caltrans or any other agencies are required  
18 to follow it. In this public work area, once you get into  
19 spacing, the designs and the edges, those are continuous as to  
20 text book, meaning the standard of a signs book, and those are  
21 the criteria the designers use. Those are not shall or the  
22 should. So unless -- you're still within those rules when  
23 you're designing those signs. But in this case the signs are  
24 not there.

25           So that's really, I would say, unclear as to the

1 spacing criteria requirements of a sign that doesn't exist,  
2 trying to make it as a shall requirement. Because in that case  
3 you won't be only limited to 15 by 16 inch. We will end up  
4 with actually a 36 by 36 diamond if you have to do it  
5 correctly. So that's where we will end up.

6           And lastly, for the placement, yes, when we can  
7 design manuals regarding the placement of the signs has done it  
8 according to the design of the Highway Design Manual procedures  
9 before. But this being a warning message, the Table 2C4, the  
10 placement of the warning signs, that is what would apply. And,  
11 of course, once we include it into the manual and it makes it  
12 into Chapter 2C we don't single out every warning sign and  
13 their placement. So by default, Table 2C4 will apply in this  
14 case. And that's a guidance, not a requirement but it's a  
15 guidance. And that's what Caltrans will use to determine the  
16 appropriate location of that flexibility.

17           So when I look at these issues the only issue that I  
18 see as far as color, and we are willing to change that, and  
19 that was the issue. Apart from the others, they are vague.  
20 The feds don't have a sign. This sign has been out there. So  
21 we re going to see, unless we get officially something in  
22 writing singling these out. Otherwise, we would be willing to  
23 just go with the minor change, change in color, and I think it  
24 will be meeting the criteria. It has worked for the public  
25 for, what, 30-plus years in California. I don't think it's



1 going to be that different. Thanks.

2 CHAIR ROBINSON: Thank you. I have one question of  
3 you, please. What would it take to make the change to reduce  
4 the letter size in order to increase the spacing?

5 MR. WANG: If you want to increase the spacing,  
6 basically you have to shrink the letter size. And right now  
7 the letter size is only four-and-a-half inch; right? You know  
8 there -- the legibility, you know, for the public basically  
9 depends mostly on the letter height instead of spacing, you  
10 know? That's my understanding, so --

11 CHAIR ROBINSON: Yes. But it would still meet the  
12 standard if it were reduced to -- to that.

13 MR. BHULLAR: Johnny Bhullar with Caltrans. Yes.  
14 Let me speak on that issue. The manual has a precedent for  
15 (inaudible) signs in the few cases where it says that we do not  
16 want you to sacrifice the size letter heights. We would rather  
17 have you skip the border or break the other rules. And that is  
18 what would be applicable. And I would say that Steve Pyburn  
19 maybe should check with the MUTCD team. The last thing you  
20 would want to do is reduce letter height just to meet a border  
21 issue or a spacing issue, because I wouldn't do that. I would  
22 rather skip the spacing. And for spacing size there's a  
23 paragraph that talks about this. You can (inaudible) the  
24 spacing and skip the borders, but don't reduce letter heights,  
25 and that's very clear.

1 CHAIR ROBINSON: Okay. But my question was: What  
2 would it take to do that? Do you have the ability to do that  
3 if that were the decision?

4 MR. WANG: Zhongren Wang from Caltrans. If we want  
5 to reduce the letter height and increase the spacing,  
6 everything, we have to redesign basically the entire LED panel,  
7 you know, just behind it.

8 MR. BHULLAR: Well --

9 MR. WANG: So the product internally would have to  
10 change the panel.

11 MR. BHULLAR: Well, yeah. Johnny Bhullar with  
12 Caltrans. Basically, if you are going to reduce that to try to  
13 meet that, actually, you are going to end up, first of all,  
14 trying to meet all the -- the edge spacing. So the sign is  
15 going to be very different because there is no point in trying  
16 to reduce it to just increase the spacing a little bit because  
17 either you meet the spacing, the corners, then you also have to  
18 have the border and the border has to be inset, because if  
19 it's -- depending on whether the border is light or dark it  
20 goes either on the edge of what's been set. And those rules  
21 will become applicable. Then with that design criteria, this  
22 is going to end up as a very different sign. So I wouldn't try  
23 to limit myself then to 15 by 12.

24 MR. WANG: Okay. And Zhongren Wang again. Just, I  
25 had one point. When I made my presentation there the first

1 thing I mentioned, I pointed out, you know, all these signs are  
2 placed at the core area, you know, when you are trying to, you  
3 know, merge at the entrance of on ramps. Basically, the area  
4 is really small. You have -- you have so many other signs  
5 there, you know, competing in this space. And then, you know,  
6 once you try to find the appropriate location, you know,  
7 really, you don't want too big a sign.

8           So I think, you know, in the Federal Highway you have  
9 W37 sign and W38 sign. Other signs, you know, it's really  
10 going to be big, all right? Especially at urban areas when you  
11 use it you have to work a clearance, all those type of things.  
12 If you want to make this thing big, probably you need to change  
13 the support, change the conduits, this and that. So that's why  
14 we -- we still like this product.

15           And in our statewide we have statewide, you know, ten  
16 districts, you know, basically we have about 20-person team  
17 statewide ramp metering team. You know, when I polled them and  
18 I said, you know, do you guys want to change this Meter On  
19 sign, their answer is that if something is not broken, don't  
20 change it. So -- but, you know, we did recognize -- you know,  
21 we appreciate whatever Steve and the Federal Highway mentioned,  
22 that the color we have to change. And the letter height, you  
23 know, as long as we meet the minimum criteria I think we're  
24 fine. Our engineering judgment, we want it to remain the same,  
25 just change it out.

1 CHAIR ROBINSON: Okay. Thanks.

2 MR. WANG: Thank you.

3 CHAIR ROBINSON: I'm going to let Steve have one more  
4 say, and then we're going to bring it back into the committee.

5 MR. PYBURN: Steve Pyburn, Federal Highways. One  
6 thing that's troubled me when I -- when I kicked this hornet's  
7 nest, so to speak, is does the pole have to be replaced. And  
8 Zhongren just said they don't know. I got the impression you  
9 don't know if the pole needs to be replaced, if it's adequate  
10 or not.

11 The minimum sign required 24 by 12 for a rectangular,  
12 24 by 24. That's a minimum -- that's -- that's a shell.  
13 That's -- it's in -- for warning signs the minimum size are  
14 specified.

15 So I was concerned if the pole needs to be replaced.  
16 But if it's -- what is it, a 15B or a 15b, you know, single  
17 signal pole, is that adequate for a 24-inch by 24-inch blank-  
18 out sign? I don't think that -- that question hasn't been  
19 answered for me. So is that required or not? Is that pole  
20 adequate right there? I don't --

21 COMMITTEE MEMBER JONES: Mr. Chairman?

22 MR. PYBURN: If that's known, if Caltrans maintenance  
23 has said that pole is adequate or not, that -- I would like to  
24 know that.

25 CHAIR ROBINSON: Thanks, Steve. We -- actually, I'd

1 like to -- John -- John was in first. I'd like to hear from  
2 John.

3 COMMITTEE MEMBER JONES: Okay.

4 CHAIR ROBINSON: Good morning.

5 MR. FISHER: Good morning. Good to see you all.  
6 John Fisher, now semi-retired former chairman of this  
7 committee.

8 When I was with the City of L.A. we had installed a  
9 number of No Left Turn signs using the ped-head configuration.  
10 That was the only technology available to us at the time. As  
11 LED technology developed we abandoned the ped-head modules  
12 where we could fit in No Left Turn but with crowded letters and  
13 without adequate spacing and went to the -- a larger No Left  
14 Turn sign.

15 Now, I know we're not talking about No Left Turn  
16 here. We're talking about Meter On or some other similar  
17 message. But I think there is an opportunity here to consider  
18 using the latest technology. We shouldn't have to be wed to  
19 ped-head modules and their limited, whatever it is, 16-inch  
20 square size. Certainly, those ped-head modules that are  
21 present at many of the on ramp meters can stay there through  
22 their useful service slides. But this is an opportunity to  
23 upgrade to get a more adequate size sign if you wish to do that  
24 using the many LED vendors that are out there.

25 With regard to is the pole adequate, I believe that's

1 what they call a type-9 pole, or it's similar to a type-1 pole,  
2 that will easily hold the area of a signal head. And a signal  
3 head, if it's 12 inch, you know, its about 4 feet high  
4 altogether -- altogether, considering backplate. And that  
5 would be more area, much more area than what we're talking  
6 about here for a 24 by 24 inch sign. So I believe that that  
7 pole is adequate. And we use type-9 poles for our upgraded No  
8 Left Turn signs that are larger than this ped-head module  
9 there. So I don't think the pole is going to be much of an  
10 issue. You'll have to figure out how to connect it, but I  
11 don't -- I don't think that will be a problem.

12 CHAIR ROBINSON: Thank you.

13 MR. FISHER: Thank you.

14 CHAIR ROBINSON: Okay. We're going to -- Dave, you  
15 have on -- you have a thought?

16 MR. ROYER: I was waiting. I thought Johnny was  
17 going on. Dave Royer, consulting traffic engineer, also  
18 formerly with the Los Angeles Department of Transportation.

19 I concur with the concerns of the Federal Highway  
20 Administration because sign background and sign letter spacing  
21 is as critical as letter height or the wording on the letters.  
22 And if you want to see an example of that, drive down Highway  
23 111. They took the regular little 18-inch blade of a mast arm,  
24 mounted street names signs and all the little cities, shoved  
25 the street name up to the top and then put the city of blah,

1   blah, blah, and their city seal. And I was driving down there  
2   because I arrived yesterday. I had -- I'm going to be teaching  
3   a class here next week, so I wanted to go meet with the people.  
4   And I took a look at the sign size. I could not read one  
5   single street name as I was coming down Highway 111 until I was  
6   nearly at the crosswalk line because they put so much garbage  
7   on the mast arm mounted street name sign.

8               Actually, the background size and the letter spacing  
9   was originally developed for the California Department of  
10   Highways or Division of Highways by Slade Halbert (phonetic)  
11   way back in the late '50s and early '60s. That sign spacing --  
12   I'm sure it's been modified slightly -- but that sign spacing  
13   was determined on human factors. That was what Slade Halbert  
14   was, was a human factors expert, one of the very first. And he  
15   developed the science basing for what is now Caltrans, but the  
16   State Division of Highways. And that is the sign spacing that  
17   was used when Caltrans started developing the big overhead  
18   freeway signs and all of that.

19              So that's basically it. You've got to make sure the  
20   sign is readable. And by the way, I also concur with John that  
21   the city I do some consulting work in, the one I live in, Santa  
22   Clarita, uses a lot of blank-out signs. All their railroad  
23   crossings, you know, No Right Turns and things like that come  
24   on when the high-speed Metrolink trains come flying through the  
25   city. And that sign is purchased and it comes in a box. You

1 know, it probably would cost more to have special modules made  
2 to fit in an old ped-head than to just buy the sign in a box.  
3 And when they buy the box the manufacturers of the sign assure  
4 sign spacing and assure the background color. So anyways,  
5 that's it. Thank you.

6 CHAIR ROBINSON: Okay. Johnny, do you have one last  
7 item? And then we're bringing it back to the committee.

8 MR. BHULLAR: I just had one last, actually, comment  
9 or question. Because -- this is Johnny Bhullar -- Steve Pyburn  
10 had mentioned a minimum size for warning signs. Actually, the  
11 sign design begins with the letter height and then it goes  
12 up -- and that's what determines the minimum size of a sign.  
13 There is no such thing as in general a minimum size for new  
14 warning signs.

15 CHAIR ROBINSON: Okay. Thank you. Now we're going  
16 to bring this back into the committee. Comments, thoughts from  
17 the committee?

18 COMMITTEE MEMBER BENTON: Yeah.

19 CHAIR ROBINSON: Janice?

20 COMMITTEE MEMBER BENTON: So again, we appreciate all  
21 the comments and information coming in. The one thing I want  
22 to point out for this particular -- the one that we're really  
23 talking about is the ped-head version of this. And the intent  
24 of this particular one is, as you can see, it's a small --  
25 small core location. Not a lot of room to put additional



1 information. You know, there's already signs and everything.  
2 So we're trying to keep that particular situation -- or provide  
3 that particular situation with a sign that doesn't get too big.  
4 So we don't pedestrians hitting it. We don't want other  
5 vehicles hitting it and so forth.

6           For example, the one -- the picture on the left there  
7 show there's obvious pedestrians coming through here. So  
8 we're -- we're trying to maximize the -- the message to the  
9 driver, at the same time not overwhelming them with this one  
10 warning sign that's trying to tell the driver ramp meter is on.  
11 Because, again, when they get to the end of the ramp, that's  
12 where the ramp meter is. So this isn't the -- the -- this is a  
13 warning sign just letting them know ahead this is that the  
14 meter is on today, right now during these hours.

15           So -- so we're trying to give it information. We're  
16 not trying to come up with a new design, a full-blown aspect of  
17 doing these signs. So that's -- I just wanted to make sure  
18 that was out there.

19           CHAIR ROBINSON: Thank you. Hamid?

20           COMMITTEE MEMBER BAHADORI: Mr. Chairman, this -- I  
21 think I just -- somebody -- Caltrans staff said why fix  
22 something that ain't broken. And I understand the need for  
23 update and upgrade and all that. On this one I don't see the  
24 need. I mean, sometimes we can get too bogged down in the --  
25 in our own creations. And as they say, perfection of the enemy

1 of good. So sometimes we do, in trying to fix everything  
2 exactly and precisely we are causing, actually, problems.

3           If the pole is going to need to change my vote on  
4 this would definitely be absolutely no, because it's going to  
5 cost a lot of money to change those poles and you're not going  
6 to get the benefits. The motorists are not going to get the  
7 benefit. Anybody who uses a freeway, as soon as they see these  
8 signs blinking they know the ramp meter is on. Even if half of  
9 the letters are gone and blank, and even if the whole face of  
10 the sign is covered with fog and rain, as soon as you see these  
11 signs blinking you know it means meter on.

12           So it's -- so I understand, you know, that if there  
13 is a new technology we've got to go toward it and we shouldn't  
14 shy away from adopting new technology. But on this one I just  
15 have mixed feelings. Because if it's going to cost the state  
16 millions of dollars which we already don't have just to change  
17 a quarter of an inch to five-eighths of an inch or something  
18 like that, I don't know if it's worth it. I don't know, it's  
19 just -- again, you know, it doesn't affect any jurisdiction in  
20 California except Caltrans.

21           So my suggestion is for Caltrans and FHWA, go, do,  
22 and work it through and come back. I don't think it's ready  
23 for the -- for the discussion by the Devices Committee, at  
24 least not yet, because we don't know if the poles have to  
25 change, we don't know how much is the cost if they want to

1 change the circuit board and still fit it within the module.  
2 There's a lot of unknown for the committee to make -- at least  
3 in my mind -- to make an informed vote on this because it's  
4 just -- it's so easy to pick those details and say it doesn't  
5 conform, it doesn't conform, it doesn't conform. But what do  
6 we get in terms of actual tangible measurable benefit to  
7 traffic safety on the road? Because that's the ultimate  
8 objective. Compliance with the standards is only good when it  
9 serves the purpose. The purpose is not just to comply with  
10 standards. The purpose is to improve traffic safety.

11           And I have mixed feelings on this. I don't have all  
12 the answers. I don't know if the pole needs to be changed or  
13 not. If the pole needs to be changed I would say, no, don't do  
14 it.

15           CHAIR ROBINSON: Jeff?

16           COMMITTEE MEMBER KNOWLES: Well, I do support  
17 Caltrans in trying to keep the sign contained within a standard  
18 ped-head because it's such a nice hardened time-proven  
19 weatherproof box. And there's no -- you know, and so the issue  
20 of changing poles goes out the window if we can contain it  
21 within that box.

22           But based on all of our conversations at this  
23 committee, we either feel that character spacing, word spacing  
24 is important or not. And clearly I understand that we don't  
25 want to sacrifice letter height to increase spacing. But the

1 fact of the matter is we can maintain standard letter height,  
2 four inches, and still gain almost all the spacing we're  
3 looking for.

4           So I would most prefer to support the second -- the  
5 second and third sign I have no problem with. But with the --  
6 the Figure 8, 9, 10 and 11 sign in the recommendation I would  
7 strongly support, since they're going to already be changing  
8 the LEDs from white to yellow, and it's not going to cost  
9 millions to redesign one circuit board design to change the  
10 letter sizes to four inch with a two-inch space in between,  
11 with the remaining space going to the outer edges. I would  
12 strongly recommendation Caltrans move in that direction to be  
13 more consistent with our other word message signs.

14           COMMITTEE MEMBER BAHADORI: If they can do it.

15           COMMITTEE MEMBER KNOWLES: They can.

16           COMMITTEE MEMBER BAHADORI: They can?

17           CHAIR ROBINSON: Any other comments from -- from the  
18 committee?

19           COMMITTEE MEMBER JONES: I would just ask our CHP to  
20 chime in. Are we -- are you guys having enforcement issues  
21 with this sign out there or that motorists are not realizing  
22 that the meters are on and they're saying I didn't see a Meter  
23 On sign prior, and that's why I ran --

24           COMMITTEE MEMBER RICKS: I've never, in 25 years,  
25 never heard a comment on the Meter On signs at all.

1 COMMITTEE MEMBER JONES: Okay.

2 COMMITTEE MEMBER RICKS: Like I said before, I mean,  
3 they're, in my opinion, they're beneficial. They're fine how  
4 they are. They work. They've been working for a long time.  
5 And the size of the letters, that's an engineering thing and  
6 I'm definitely not on that level. But I've never heard of  
7 any -- any issues with the signs as all as far as --

8 COMMITTEE MEMBER JONES: And they're not using that  
9 as an excuse as to why they're running a red light at the ramp  
10 either?

11 COMMITTEE MEMBER RICKS: No, I've never -- never  
12 heard a comment on that.

13 COMMITTEE MEMBER JONES: Okay.

14 CHAIR ROBINSON: Okay. If there are no other  
15 comments I would entertain a motion.

16 By the way, Jeff, I agree with you. I would like to  
17 see some effort put into increasing the spacing to address  
18 the -- the comment that -- that Steve made on that. That  
19 would -- that would show that there was effort made to -- to  
20 bring it in to closer compliance. I, too, agree with the --  
21 with the fact that we've already got any closure that is a  
22 standard size. And I don't see a real need, even though we  
23 have new technology, to monkey with it if it's something that's  
24 reasonably consistent. And I think this is one of those where  
25 people have seen them and they -- they know there's a message

1 in there and they can -- they can expect it.

2           It is only a Caltrans sign. It's not going to affect  
3 anyone else. And -- but I don't want to make the motion. If  
4 someone else wants to make a motion one way or the other, then  
5 I'll -- I'll be happy to second.

6           COMMITTEE MEMBER BAHADORI: I'll make a motion  
7 following Jeff's suggestion that we suggest that Caltrans staff  
8 look at the redesign of the circuit board itself to optimize  
9 the use of this space with a minimum letter size trying to fit  
10 the maximum clearances between the lines and edge as possible  
11 to see if that's doable. If -- if you're still missing like  
12 one-eighth of an inch on an edge clearance I wouldn't lose  
13 sleep over that. That's not part of the motion. That's  
14 commentary. But if -- if you're meeting the minimum letter  
15 size and the clearance between the lines, and if you can use  
16 the existing modules and the existing poles that we have, just  
17 stay with what we have.

18           CHAIR ROBINSON: So to make sure that I understand,  
19 your -- your motion is to ask Caltrans to go back to redesign  
20 the letter height to minimize the letter height but still be a  
21 standard height to -- in order to maximize the spacing between  
22 the two words?

23           COMMITTEE MEMBER BAHADORI: I would put it as to  
24 optimize the space --

25           CHAIR ROBINSON: Optimize the space.

1 COMMITTEE MEMBER BAHADORI: -- that they have  
2 available with the minimum letter height to provide the maximum  
3 clearances.

4 CHAIR ROBINSON: And then you would -- and your  
5 motion is asking them to bring that back as to feasibility?

6 COMMITTEE MEMBER BAHADORI: As feasibility. And if  
7 it's coming back, then I would like other questions answered  
8 also. What happens if we abandon the existing heads, do we  
9 need to change poles also or not?

10 CHAIR ROBINSON: Then I'm not clear on your motion.

11 COMMITTEE MEMBER BAHADORI: Well, the motion is for  
12 me is just I'm okay with the sign. I just asked them to go and  
13 work on optimizing, lowering the height of the letters so that  
14 they can have more clearance.

15 CHAIR ROBINSON: So your motion would be to -- to  
16 require them to change the size --

17 COMMITTEE MEMBER BAHADORI: The size.

18 CHAIR ROBINSON: -- for the -- for the -- to get the  
19 approval?

20 COMMITTEE MEMBER BAHADORI: Yes.

21 CHAIR ROBINSON: Okay.

22 COMMITTEE MEMBER KNOWLES: The letter size.

23 CHAIR ROBINSON: The letter size. So there's a  
24 motion. Is there a second?

25 COMMITTEE MEMBER KNOWLES: I second.

1 CHAIR ROBINSON: A motion and a second to keep the  
2 same enclosure but to reduce the letter size in order to  
3 maximize the spacing between the two words.

4 COMMITTEE MEMBER BENTON: Can I clarify this, that if  
5 we do this motion and proceed, does it need to come back to the  
6 committee?

7 CHAIR ROBINSON: No.

8 COMMITTEE MEMBER BENTON: Okay.

9 CHAIR ROBINSON: That's the way I understand it, the  
10 maker of the motion?

11 COMMITTEE MEMBER BAHADORI: Yeah, it doesn't need to  
12 come back.

13 CHAIR ROBINSON: Okay. So we've got a motion and a  
14 second. Any comments?

15 COMMITTEE MEMBER JONES: This also takes care of the  
16 other two signs or do we have to make a motion on the other  
17 signs?

18 CHAIR ROBINSON: No. This will be to approve all of  
19 the signs because there was no --

20 COMMITTEE MEMBER JONES: Okay.

21 CHAIR ROBINSON: -- there was no disagreement with  
22 the others.

23 COMMITTEE MEMBER JONES: Okay. That's what I just --

24 CHAIR ROBINSON: All right. So we have a motion and  
25 a second. All in favor, signify by saying aye.



1           ALL COMMITTEE MEMBERS:   Aye.

2           CHAIR ROBINSON:   Any opposed, say nay.   The motion  
3 carries unanimously.

4           Well, Hamid, do you think we're still going to get  
5 out of here at noon?

6           COMMITTEE MEMBER BAHADORI:   Absolutely.   Absolutely.

7           CHAIR ROBINSON:   Thank you.   This was good  
8 discussion.   Thank you all.

9           COMMITTEE MEMBER BAHADORI:   It's not fair.   They  
10 amended the agenda, you know?

11          CHAIR ROBINSON:   That one -- that one, that took me  
12 by surprise.

13          COMMITTEE MEMBER MARSHALL:   Mr. Chairman, can I just  
14 make --

15          CHAIR ROBINSON:   Yes, Rick?

16          COMMITTEE MEMBER MARSHALL:   -- an after-the-fact  
17 observation?   I preparing for the meeting and reading the staff  
18 report on this item I was not able to successfully understand  
19 that this was going to be even this controversial.   And I would  
20 have appreciated having information provided to us to let us --  
21 to kind of forewarn us if FHWA had a different perspective.   I  
22 think I would have approached it in my preparation a little  
23 differently.   So that, that's just for future.   If something  
24 similar comes to us in the future that would be appreciated.

25          CHAIR ROBINSON:   Rick, that's -- that's a good

1 observation. And I felt the same way, as well. So it might  
2 have been a better situation had we been aware of the areas  
3 where the sign did not meet or if it was not part of an FHWA  
4 standard.

5 COMMITTEE MEMBER MARSHALL: Thank you.

6 CHAIR ROBINSON: Thank you, Rick. Okay.

7 We're going to move on to item 12-20, FHWA 2009 MUTCD  
8 Revisions 1 and 2, Engineering Judgment and Compliance dates,  
9 submitted by Caltrans.

10 Janice?

11 COMMITTEE MEMBER BENTON: Okay. This is -- this is a  
12 follow-up action -- or follow-up agenda item from the last  
13 meeting. There was a motion for additional information and  
14 follow-up regarding the adoption of this particular item. So  
15 I'll defer to Johnny Bhullar, our California MUTCD editor  
16 within Caltrans.

17 MR. BHULLAR: Janice -- oh. Johnny Bhullar with  
18 Caltrans. And this is the item from the previous meeting which  
19 we had submitted and we had a really detailed discussion on --  
20 on how the Revision Number 1 and Revision Number 2 were made  
21 affective nationally. But we have two years, and that's why we  
22 are looking into and working on making -- pretty much accepting  
23 what the version of -- the way the feds have made them official  
24 on the compliance dates. However, on the Engineer Judgment  
25 there was a couple of ways of doing it, and that's -- that was

1 our question at that time.

2           But the real reason at the time we had to postpone  
3 this item was that Caltrans consult with our legal and make  
4 sure that Caltrans' legal is okay with the -- the documentation  
5 part of this element. And what we had is a meeting with our  
6 legal, and working with them, trying to go through the total  
7 liability issues we asked them what -- how do you read these,  
8 and are these sufficient for your -- the policies, sufficient  
9 for your purpose? They -- they said that they reviewed them  
10 again and from their perspective they do not want to include in  
11 the manual the criteria for that documentation. Because that  
12 opens up another area which is what is the proper document? Is  
13 it the standard plan? Is it the project plan? So then it gets  
14 into the area of what constitutes an official document that  
15 will represent the -- the revisions. Wherever you are reading  
16 from, this is the document.

17           So because of that they said on purpose they had,  
18 even in the past, they had been looking at and guiding us. And  
19 on purpose they said each agency might have a difference, but  
20 even for Caltrans as a big agency, our projects, our locations  
21 are so different. And in some cases, some (inaudible) project.  
22 So all they have is just notes and they vary. So as soon as  
23 you start describing what the documentation will be then we'll  
24 be leaving something out or narrowing things down.

25           So with that what they said is the way we have

1 presented before, so I can go through and try to walk everybody  
2 through it, if needed. But they said they are perfectly okay  
3 and did not want us specifically to file this request that  
4 anytime an engineer deviates from the shall in the manual or a  
5 should in the manual, that there has to be a D document and  
6 what the document is to be. So we've done that part, and  
7 that's what we were asked to do as an outstanding item on this  
8 issue.

9           So I'll just very briefly walk through -- everyone  
10 through the pages here. As you can see, on page 9 -- on page 9  
11 of the agenda that we have is -- these are all the existing  
12 California MUTCD 2012 language. On purpose what I did is first  
13 I showed what the existing is. And then it goes onto page 10  
14 and 11, and this is existing. And on page 10 I'm trying to  
15 show here existing versus proposed. So if we look at it, this  
16 being existing, once we get to page number 10 and up there what  
17 you'll see is that the language now in the manual and as per  
18 our proposal is -- this is unchanged. And we are crossing this  
19 out because this is,

20           "The decision to use a particular device at a  
21           particular location should be made on the basis of  
22           either an engineering study or the application of  
23           engineering judgment."

24           This is now included up here by the feds as part of  
25 the new -- new official policy.

1           So this was something that we had before included  
2 from their draft proposal, as you can see here. So Paragraph  
3 Number 02A, Existing, was something we had taken from the draft  
4 proposal. And now we don't need to so we're taking it out  
5 because now, as per their official policy, that paragraph or  
6 that language now is addressed up here.

7           However, the second part of that element is that we  
8 had, back before this, going to the draft proposal, we had  
9 incorporated Paragraph Number 02B that is currently in our  
10 official manual. And that was -- that said that,

11           "An engineering study of the application of  
12       Engineering judgment determines that unusual  
13       site-specific conditions at a particular location  
14       make compliance with a standard statement in this  
15       manual impossible or impractical, and agency may  
16       deviate from that standard statement at that  
17       location."

18           This wording was from the feds in the proposal. And  
19 we think there is value to it. And that's our current policy;  
20 it's current accepted. We do not want to take that out because  
21 that's the option we're recommending. We just add whatever  
22 they had provided up here. We accept that. We want just one  
23 thing; clarification that we had accepted before from the draft  
24 proposal. So basically that what we are asking for here.

25           CHAIR ROBINSON: Thank you, Johnny.

1 Initial comments from the committee?

2 COMMITTEE MEMBER BAHADORI: Mr. Chairman, can I ask a  
3 question?

4 CHAIR ROBINSON: Hamid?

5 COMMITTEE MEMBER BAHADORI: So we didn't have a  
6 problem with this to begin with.

7 MR. BHULLAR: Yes. Basically, what happened there is  
8 that working with the feds in this case and said they were --  
9 they were having -- taking time on making it effective. They  
10 did, initially when we looking at the proposal they said they  
11 would not be adopting the 2009 manual last year when -- within  
12 the due date. Because if you do that with the engineering  
13 standard for the shall, then we will be open to liability. And  
14 they said since they were now changing the application and this  
15 is what was coming, so we have a privy to that and we had  
16 already gotten rid of that.

17 COMMITTEE MEMBER BAHADORI: We did not have a problem  
18 with this section. Where is -- how is engineering judgment  
19 defined in the manual?

20 MR. BHULLAR: Okay. Well, the engineering judgment,  
21 that portion --

22 COMMITTEE MEMBER BAHADORI: Because this language is  
23 perfect.

24 MR. BHULLAR: Yeah. That portion is unchanged. And  
25 there is no change to that portion.

1           So, Hamid, at the last meeting you had asked us to  
2 look at the documentation. That portion, the feds changed  
3 Revision 1 or 2. Now our version did. That has been the same  
4 as before. But we did look into it and check with our legal.  
5 If you want I can bring that up.

6           COMMITTEE MEMBER BAHADORI: Yeah.

7           MR. BHULLAR: Okay.

8           COMMITTEE MEMBER BAHADORI: Please.

9           COMMITTEE MEMBER KNOWLES: Well, if you're going to  
10 look at -- I have quick -- at what point in time was Paragraph  
11 6 added?

12          MR. BHULLAR: Paragraph 6 on page -- what page?

13          COMMITTEE MEMBER KNOWLES: Well, Section 1A.09.

14          MR. BHULLAR: Well, which page number is it? Just  
15 tell me.

16          COMMITTEE MEMBER BENTON: Page 9.

17          MR. BHULLAR: Okay. It's -- this was added for 2012.  
18 But this is separate issue. This paragraph was added because  
19 of Steve Pyburn's concerns with the, I would say Board of  
20 Consumer Affairs and the way the Title Act and those work. And  
21 when we went to our workshops, and looking at his issues,  
22 that's how we came up with this wording.

23          COMMITTEE MEMBER KNOWLES: Because I don't remember  
24 that we ever discussed this at the workshops.

25          MR. BHULLAR: Oh.

1 COMMITTEE MEMBER KNOWLES: Was it just added  
2 editorially later by Caltrans?

3 CHAIR ROBINSON: It must have been. We didn't talk  
4 about it.

5 COMMITTEE MEMBER KNOWLES: We never talked about it.

6 MR. BHULLAR: Oh, okay.

7 COMMITTEE MEMBER KNOWLES: Because I never missed one  
8 of those meetings and we never discussed it.

9 MR. BHULLAR: Well, I'll have to look into that. But  
10 if I remember, yeah, we were going through all these comments.  
11 And maybe you're hearing Steve Pyburn's comments. That's how  
12 it got addressed. So I'll have to look into my records for  
13 sure. But I'll -- I'll go on the record and say that I  
14 wouldn't normally put it in unless it was discussed.

15 COMMITTEE MEMBER KNOWLES: Well, I know we didn't  
16 discuss it, because this is such a different practice than what  
17 is experienced in most local agencies that have traffic  
18 engineering staff. You have experienced staff that works  
19 solely with traffic and transportation matters. And this would  
20 involve us bringing in a civil engineer that does not practice  
21 traffic engineering just to rubberstamp/sign work orders, you  
22 know, just about anything that traffic engineering does for  
23 local agencies.

24 MR. BHULLAR: Well, yeah, this issue has come up  
25 after this has gone into the manual, and John Fisher has also



1 raised it. However, like I said, I'll -- I'll have to go into  
2 my records. But all I can say is I know it was part of one of  
3 the workshops, but let's dig it up and I'll get back to you on  
4 that. But we are revisiting this issue, and this is unrelated  
5 to what we are discussing here.

6 COMMITTEE MEMBER KNOWLES: I understand.

7 CHAIR ROBINSON: But it did -- I believe it did get  
8 added since the last time --

9 MR. BHULLAR: Yeah.

10 CHAIR ROBINSON: -- when we talked about this.

11 MR. BHULLAR: No. I can vouch for that it was added  
12 to address Steve Pyburn's comments. When we issued the January  
13 13th, 2012 Manual, it was not there before.

14 COMMITTEE MEMBER KNOWLES: Because normally we  
15 wouldn't have discussed this because there wasn't a change in  
16 the federal document that directly affected this paragraph.  
17 And in our workshops, generally we were only talking about the  
18 need to modify the California Manual relative to changes in the  
19 2009 Federal Manual. So this would not normally have come up  
20 in those conversations. This would have been an item that we'd  
21 be discussing now as non-Federal Manual change-related issues.

22 COMMITTEE MEMBER BENTON: Can I -- can I recommend  
23 that we -- we table the conversation now --

24 COMMITTEE MEMBER KNOWLES: Yes.

25 COMMITTEE MEMBER BENTON: -- and we'll bring it as an

1 agenda item coming forward --

2 COMMITTEE MEMBER KNOWLES: Please.

3 COMMITTEE MEMBER BENTON: -- at the next meeting.

4 CHAIR ROBINSON: Okay. Other comments from the  
5 committee?

6 Seeing none, why don't we go ahead and poll the  
7 audience. Do we -- anybody from the audience interested in  
8 speaking? Dave?

9 MR. ROYER: This item was a lot of concern to me. Is  
10 this the microphone?

11 COMMITTEE MEMBER JONES: No.

12 COMMITTEE MEMBER BENTON: No. It's right there in  
13 front of you.

14 MR. ROYER: There it is. Okay. I want to make sure  
15 I didn't move a microphone off. Is that a microphone? No.  
16 It's another mouse.

17 The -- it first kind of came to my attention when  
18 somebody when I was teaching a class emailed me what I think is  
19 a wrong opinion by a judge in some -- some lawsuit, I think  
20 involving work zones. Basically, the judge said that -- and  
21 this is on the top of page 10 of the agenda, which is 1A.13,  
22 Definitions, etcetera, where it talks about a standard. And we  
23 crossed off the standard without following it with some kind  
24 of -- another -- some other statement referring you to some  
25 other place in the manual. The judge read that as, oh, okay,

1 there are no more standards, that any engineer could at any  
2 time for any reason just throw out the standard and say -- base  
3 it on engineer judgment.

4           And I agree, I don't really like that old standard.  
5 There are times that you do have to violate a standard just  
6 because of existing field conditions or because of your own  
7 studies or whatever. And I think that should be replaced with  
8 some form of another sentence put in there, perhaps similar to  
9 the wording that we do with the traffic and engineering survey.  
10 You know, the traffic and engineering survey says it has to be  
11 done by a licensed engineer based on -- based on a study and a  
12 report, you know, included in the engineering and traffic  
13 survey.

14           I wasn't at the last meeting but I did read the  
15 agenda and -- or the minutes, rather, and the minutes, there  
16 was a lot of discussion about, oh, you'd have to prepare a  
17 report and where would you keep it, and all of that. If you're  
18 not keeping those kind of reports, your agency is really hung  
19 out to dry with -- on things like design immunity, why did you  
20 do it? And I'll give you -- and then, also, engineering  
21 discretion. So the one is 830.6 of the -- of the Government  
22 Code, and the other is 830.4 of the Government Code is  
23 engineering discretion to apply traffic control devices.

24           City of Dana Point, somebody came along for some  
25 reason and, after the road was resurfaced, didn't put in some

1 optional pavement markings for bike lanes. And there was  
2 nothing to go back. The traffic engineer had passed away. In  
3 the meantime -- and nobody went back anytime or had any record  
4 of was there a conscious decision to not reinstall those. And  
5 that -- there was no proof of that. And that case had to  
6 settle for \$50 million. And that's common place these days for  
7 verdicts that high. And the whole reason they got that \$50  
8 million, that traffic engineer may have made the decision,  
9 those bike lane pavement markings are optional in that  
10 situation and we don't feel it's necessary to reinstall them.

11           So without some form of a report you really may have  
12 a hard time downstream. Again, when I was with the City of Los  
13 Angeles, you know, we prepared traffic control reports over  
14 everything about everything, it seemed like. And many of  
15 those, timing charts and all our design plans, were kept  
16 forever. And many times we had to go back well beyond the ten-  
17 year record period to show that the timing was designed -- was  
18 designed in accordance with the standard at the time, and so  
19 on. And we were able to achieve design immunity based on that.  
20 So that's -- that's a great concern to me.

21           And it should really -- if you didn't want a  
22 statement like that, which is a similar statement to what's in  
23 the traffic and engineering survey, at least make reference to  
24 Section 1A.09, which is right down below on the at same page,  
25 so that people go to that and are able to read that, at least.

1           And another thing -- and I just found this on my  
2 own -- definition of an engineer, it's kind of interesting. It  
3 says a person registered under Professional Engineers Act as a  
4 professional engineer, and such and such and such. But just a  
5 professional engineer. Well, in California we don't register  
6 just professional engineers. We register them by title Acts  
7 and by all kinds of other practice acts. So if you read that,  
8 any engineer that's making these decisions, could be a soils  
9 engineer, an agricultural engineer, or one of the other 20, I  
10 think it is, different engineering titles and professions. In  
11 California specifically we need to change definition 63A,  
12 Engineer, to say a licensed civil engineer or traffic engineer.  
13 That's just something I picked up on.

14           So anyways, that concludes my statement.

15           CHAIR ROBINSON: Thank you.

16           MR. ROYER: Thank you.

17           COMMITTEE MEMBER BAHADORI: Mr. Chairman?

18           CHAIR ROBINSON: Hamid?

19           COMMITTEE MEMBER BAHADORI: By the way, Mr. Royer had  
20 provided some comments through email to me that I've Devinder  
21 to share with the members. You all have copies of his written  
22 comment also.

23           SECRETARY SINGH: I emailed -- I emailed that to the  
24 committee.

25           CHAIR ROBINSON: Thank you. Mr. Fisher?

1           MR. FISHER: Good morning again. Paragraph 3A was  
2 inserted into the 2012 California MUTCD at the very last  
3 minute. And I know the -- the manual had been held up while we  
4 were waiting for the feds to resolve this issue. But it was  
5 added for California as I understand it. My only -- and the  
6 statement is true as it reads.

7           My only concern is that the way it reads or the way  
8 one might interpret it, it gives wholesale authorization to  
9 deviate from a standard based on judgment. And there is no  
10 requirement here to document that deviation in writing.

11           Now, the way the feds worded it they said engineering  
12 judgment, engineering studies shall be considered and are no  
13 substitute for a standard, and I agree with that. There are  
14 those rare situations. I can't think of one right now, but  
15 there must be some rare situations out there where it is  
16 necessary to deviate from a standard because of some unusual  
17 geometry or configuration or whatever it may be, and the  
18 engineers should be allowed to make that deviation.

19           What I think is important here is that we not give  
20 wholesale authorization to deviate, just it was my opinion, I  
21 did it. We don't want to make that too easy. We want to set a  
22 high standard. We want to make deviation something that you  
23 document, you put your name, you put your stamp on, you stand  
24 behind it. Because as Mr. Royer indicated, if you don't  
25 document a deviation from such an important provision as a

1 standard it's going to come back to haunt you some day. When  
2 there's an accident and you have to testify, there's no  
3 document, it leaves the agency in a compromised position.

4 Now, I recall that when we were discussing certain  
5 speed limits a few years ago we held numerous hearings and we  
6 heard from many traffic engineers, and we learned that they  
7 were taking great liberties in how they set speed limits. And  
8 that's because they were under political pressure. And as a  
9 result of that we put into the California MUTCD that when you  
10 deviate more than five miles and hour from the 85th percentile  
11 you had to document in writing. That's in the California  
12 MUTCD. We found it necessary to say if you want to deviate,  
13 fine, but document it in writing. It must be documented by a  
14 registered engineer.

15 I would think then if you want to keep then this  
16 option, paragraph 3A, I think then if you want to keep that  
17 language you also need another shall statement, standard  
18 statement that says something to the affect, if an agency  
19 deviates from a standard statement the reasons therefore shall  
20 be documented in writing and signed by a registered engineer.  
21 I just think it's too important a threshold to cross without  
22 thoughtful document.

23 COMMITTEE MEMBER BAHADORI: Mr. Chairman?

24 CHAIR ROBINSON: Hamid?

25 COMMITTEE MEMBER BAHADORI: May I ask a question --

1 CHAIR ROBINSON: Thank you.

2 COMMITTEE MEMBER BAHADORI: -- from Mr. Fisher?

3 CHAIR ROBINSON: Yes.

4 COMMITTEE MEMBER BAHADORI: Mr. Fisher, in your  
5 engineering judgment, if we add the language that you say it  
6 does not contradict or violate the legal advice that Caltrans  
7 attorneys have given them. We are not telling agencies what  
8 level of writing, what level of documentation, how many pages,  
9 does it need a picture, does it need to be bound, does it need  
10 to be electronic .pdf, or does it need to be a hardcopy. We  
11 just say that if you exercise engineering judgment to deviate  
12 from a standard, document it in writing.

13 MR. FISHER: Right.

14 COMMITTEE MEMBER BAHADORI: It doesn't --

15 MR. FISHER: We're not saying it needs to be a 20-  
16 page report.

17 COMMITTEE MEMBER BAHADORI: It doesn't tell them what  
18 that writing, to the extent, it doesn't tell them about format,  
19 about the content, about anything. It's just that some level  
20 of documentation is required, that you can't just go out there  
21 and say I used engineering judgment.

22 MR. FISHER: It could be a memo to the thought.

23 COMMITTEE MEMBER BAHADORI: It can be anything.

24 MR. FISHER: Right.

25 COMMITTEE MEMBER BAHADORI: And as -- as Mr. Bhullar



1 said and as their attorneys have advised them, then each agency  
2 can decide on their own. And Caltrans, by the way, has 14  
3 pages; they have a whole chapter on how to deviate from design  
4 standards. They can even write another manual on how to do it,  
5 but not all agencies are going to go that level. But just  
6 inserting the language requiring some form of writing doesn't  
7 force them to comply with a set of standards.

8 MR. FISHER: Right.

9 COMMITTEE MEMBER BAHADORI: It just says keep  
10 documentation.

11 MR. FISHER: When I was with my former employer,  
12 anytime the staff wanted to deviate from a guidance statement,  
13 a recommended statement, I said have a memo to file that states  
14 why you want to do that, just to protect us, and it could be a  
15 simple two paragraphs.

16 COMMITTEE MEMBER BAHADORI: Thank you.

17 MR. FISHER: Thank you.

18 CHAIR ROBINSON: Johnny?

19 MR. BHULLAR: Johnny Bhullar with Caltrans. First of  
20 all, thanks, John. John Fisher, as always, comes in with a  
21 very deepened way of explaining it. And he's correct in that  
22 this paragraph was added, Paragraph 3A, last time. But this is  
23 not California Caltrans language. This was the language that  
24 the feds had in the proposal. But since it had not gone  
25 final -- so we just included it in.

1           And, of course, like -- for the reasons stated, we  
2 have option one and two. We are not really saying that we have  
3 to keep it. This is for the committee to look at, is there  
4 value to it. However, we have accepted the -- the federal new  
5 language. And in my opinion, as long as this language was the  
6 key -- as long we are adopting this language, the one that we  
7 had before which was a part of the proposal, if they have  
8 modified it and changed it then there is not value of keeping  
9 it that can easily be -- we can, if you prefer to, then in that  
10 case to go to option two, as well.

11           So we are -- we are pretty much looking to the  
12 committee whether to keep that 3A or not, and either way is  
13 fine with Caltrans. We've gotten the statement or request that  
14 John Fisher made for the standard and the shall. I wouldn't  
15 say yes or no on that, but I've known a long time ago not to  
16 become a lawyer or try to judge what the lawyers are going to  
17 tell us. If need be we'll have to talk to our lawyers again on  
18 any language that gets proposed, because this is a very fine  
19 point that's applicable to the entire manual. And I don't want  
20 to judge it myself as to if that's appropriate or not.

21           COMMITTEE MEMBER BAHADORI: Mr. Chairman?

22           CHAIR ROBINSON: Hamid?

23           COMMITTEE MEMBER BAHADORI: Could -- could you ask  
24 Mr. Bhullar if he can look at the language that says  
25 engineering in Section 1A.13.

1 (Colloquy Between Committee Members)

2 SECRETARY SINGH: Hamid, what section did you want,  
3 1A.13?

4 COMMITTEE MEMBER BAHADORI: No. It's how do we  
5 define engineering judgment.

6 (Pause)

7 MR. PYBURN: Do we want to go back to Section 1A.13?

8 COMMITTEE MEMBER BAHADORI: No. But this is where  
9 it's defined.

10 COMMITTEE MEMBER KNOWLES: That's what you were  
11 asking? That's the section in its entirety?

12 COMMITTEE MEMBER BAHADORI: Yeah.

13 COMMITTEE MEMBER KNOWLES: Because we're not seeing  
14 the definition of an engineering study or the definition of  
15 engineering judgment --

16 COMMITTEE MEMBER BAHADORI: Yeah. How --

17 COMMITTEE MEMBER KNOWLES: -- which it says are in  
18 this section somewhere.

19 COMMITTEE MEMBER BAHADORI: Yeah.

20 (Colloquy Between Committee Members)

21 COMMITTEE MEMBER BAHADORI: Because we are saying  
22 that agencies can deviate based on engineering judgment, but  
23 how do we define engineering judgment?

24 COMMITTEE MEMBER KNOWLES: Well, look, there's  
25 engineering study right there. Don't -- stop, stop, stop.

1 COMMITTEE MEMBER BENTON: Back up. Right there.

2 COMMITTEE MEMBER KNOWLES: Okay. There's the two,  
3 judgment and study.

4 (Colloquy Between Committee Members)

5 COMMITTEE MEMBER JONES: Do we have -- can we have  
6 four-inch letters.

7 MR. BHULLAR: Thanks. Yes, if you would. Yes.

8 Joking aside, so the definition of engineering  
9 judgment says,

10 "The evaluation of available pertinent  
11 information and the application of appropriate  
12 principles, experience, education, disposition,  
13 provisions, and practices as contained in this  
14 manual and other sources for the purpose of  
15 deciding upon the applicability, design, operation  
16 or installation of a traffic control device."

17 COMMITTEE MEMBER BAHADORI: And it goes on saying  
18 that "it shall be exercised by an engineer or anybody who works  
19 under the supervision of an engineer."

20 So if your secretary in the city hall goes out in the  
21 field and says, well, gee, I don't think that we need to put  
22 these delineators here, you have satisfied the requirement of  
23 engineering judgment. Then what --

24 COMMITTEE MEMBER KNOWLES: But not a study.

25 COMMITTEE MEMBER BAHADORI: Then what that judge said

1 and Mr. Royer quoted is even more liberal than this, it's just  
2 that, hey, anybody who works under the direction in the  
3 department under direction and supervision of an engineer can  
4 exercise his or her judgment and say it was my opinion that we  
5 can't comply with this standard and we should deviate. Then  
6 what good is a standard if it can that loosely, without any  
7 documentation, be deviated from?

8 COMMITTEE MEMBER KNOWLES: But read the last sentence  
9 of engineering study.

10 COMMITTEE MEMBER BAHADORI: No, no, no. But -- but,  
11 no, we are not saying that -- use engineering study and  
12 engineering judgment. We say engineering study or engineering  
13 judgment. So if you're allowing engineering judgment to be as  
14 basis for deviation from standard without any written  
15 documentation, and then engineering judgment is so loosely  
16 defined that anybody who works under supervision of an  
17 engineer, even if he or she has no engineering training, can go  
18 out there and deviate from a standard.

19 Well, I would like to -- the only reason I'm saying  
20 is that what Mr. Fisher suggested is just simply for -- not  
21 only for protection for agencies, but giving more credence to  
22 the standards. Just saying, okay, just put it in writing, we  
23 don't tell you how to write it, we don't tell you how many  
24 pages, we don't tell you where to keep it. We don't tell you  
25 for how long to keep it. Those are all internal decisions that

1 each agency will make.

2 But because the way that this is structured, and the  
3 reason I asked that you bring this paragraph up, is that if you  
4 read this it pretty much says 80 percent of staff in city hall  
5 can get out there on the street and look at it and look, for  
6 example, a bicycle example, look at it and say my engineering  
7 judgment, we can't keep the bicycle lane during construction,  
8 and I don't need to provide detour. So what difference does it  
9 make --

10 MR. BHULLAR: But --

11 COMMITTEE MEMBER BAHADORI: -- what you write in the  
12 standards?

13 MR. BHULLAR: Well, in response what I'm going to say  
14 is that this is a national minimum policy, Code of Federal  
15 Regulation, this is our current policy. And what you are  
16 asking for is more than that. And, of course, I'm not the  
17 person to judge, and I'll be open to it, but at the national  
18 level allow the (inaudible) as well as other members are fine  
19 with the language the way it has been. So if we are going to  
20 be creating something on our own, of course, there has to be  
21 some reasoning. And that's what this committee is for.

22 COMMITTEE MEMBER BAHADORI: I'm not --

23 MR. BHULLAR: So --

24 COMMITTEE MEMBER BAHADORI: I'm just -- I'm not  
25 suggesting creating things of our own. I'm just saying that we

1 were just given an example, and I'm well familiar with the  
2 example that Mr. Royer gave, that this very small city lost \$50  
3 million in a lawsuit because the engineer --

4 CHAIR ROBINSON: Hamid, let's -- let's --

5 COMMITTEE MEMBER BAHADORI: -- who had made the  
6 judgment --

7 CHAIR ROBINSON: Let's go ahead --

8 COMMITTEE MEMBER BAHADORI: -- passed away, and there  
9 is no document.

10 CHAIR ROBINSON: Let's go ahead and get through, and  
11 then we'll --

12 COMMITTEE MEMBER BAHADORI: Sure. Yeah.

13 CHAIR ROBINSON: -- we'll discuss it internally.

14 MR. DORNSIFE: Chad Dornsife, Best Highway Safety  
15 Practices Institute and National Motorists Association.

16 This engineering judgment has been a problem for some  
17 time, because engineering judgment and guidance both, guidance  
18 in the MUTCD language is a shall that can be modified by an  
19 engineering judgment. And the engineering judgment has to be  
20 fact based. So even though it says should it's not should in  
21 how a legal interpretation of should is. It's a should with a  
22 mandatory beginning point that can be modified with engineering  
23 judgment.

24 And if you go into court and you have a quote unquote  
25 "engineering judgment" you have the right to cross-examine the

1 entirety of the foundation of the state's case against you or  
2 the causation of an accident or whatever. And all these things  
3 can be brought in, including what opinion the engineer used to  
4 make his choice. And that can be challenged in a court of law.  
5 So if you don't have any documentation you have no case,  
6 you're -- you're toast.

7           And so as far as I'm concerned, engineering judgment,  
8 if you're not documenting what you're doing and at least  
9 putting down what foundation you used, you're going to be in  
10 serious trouble. And I see it constantly for stop sign use,  
11 double yellow lines, for speed control rather than safety, and  
12 all these different things that if there's a problem the local  
13 authority is open to a lawsuit because they've deviated from  
14 the standard, and they have no documentation to support it.  
15 Thank you.

16           CHAIR ROBINSON: Thank you. Mr. Morrissey.

17           MR. MORRISSEY: Good morning. Sam Morrissey, City of  
18 Santa Monica. I just wanted to quickly state that it's my  
19 opinion that Paragraph 3 is sufficient without the addition of  
20 3A. I would support option two. I think 3A is something that  
21 could be confusing for local agencies, local jurisdictions, and  
22 I think it would cause confusion for them for understanding  
23 what is the deviation from a standard versus what is an  
24 experimental traffic control device. So I'd urge the committee  
25 to support option two.



1 COMMITTEE MEMBER BAHADORI: Mr. Chairman, can I ask a  
2 question from Mr. Morrissey?

3 CHAIR ROBINSON: Okay, Hamid.

4 COMMITTEE MEMBER BAHADORI: Mr. Morrissey, what does  
5 the City of Santa Monica practice for documenting design  
6 deviations?

7 MR. MORRISSEY: We do traffic control reports.

8 COMMITTEE MEMBER BAHADORI: And you document it in  
9 writing?

10 MR. MORRISSEY: And we document to our file.

11 COMMITTEE MEMBER BAHADORI: And you keep it --

12 MR. MORRISSEY: And we keep all that.

13 COMMITTEE MEMBER BAHADORI: -- in the design file?

14 MR. MORRISSEY: Yes.

15 COMMITTEE MEMBER BAHADORI: Thank you.

16 MR. BAROSS: I'm Jim Baross with the California  
17 Association of Bicycling Organizations. Thanks for going so  
18 slow so I could be late for this opportunity, I mean  
19 deliberative process.

20 I'm speaking in support of most of the comments I've  
21 heard about this. We would -- bicyclists would especially  
22 appreciate the judgement of a traffic engineer. We'd certainly  
23 want that judgment to be documented.

24 And I'll call your attention to something you may not  
25 have heard about. There's an Assembly Bill 1193 which has been

1 submitted. And it -- from my perspective it further seeks to  
2 weaken the adherence to California standards that are in place.  
3 So I -- especially in the light of whatever happens with that  
4 legislation, I hope it dies a quiet death, it's important for  
5 us, especially for bicyclists who are challenged with Staff and  
6 people who aren't aware of the needs of bicycling in the  
7 traffic situation. So thanks.

8 CHAIR ROBINSON: Thank you. Mr. Miller.

9 MR. MILLER: Rock Miller, alternate member to the  
10 committee. I think I said the same thing before, I do get  
11 involved in litigation. And there's absolutely no doubt in my  
12 mind that you are much better off in minimizing the risk to the  
13 agency if you have on file the reasons you deviated from a  
14 standard.

15 I've heard a lot of people mention examples of  
16 deviating from guidelines and from design guides and things  
17 like that in here. I've yet to even hear of anybody come up  
18 with a true example of deviating from a standard. I really  
19 don't think it happens that often. And I really don't think  
20 it's unreasonable to expect there to be written documentation  
21 for the reasons we would deviate from a standard. I can accept  
22 if a majority of the committee disagrees with me. We're a  
23 democratic country. But if you really want to minimize your  
24 \$50 million losses in verdicts because somebody thought  
25 something could be done differently I'd advise you to think

1 carefully about that.

2 CHAIR ROBINSON: Thank you. Mr. Pyburn.

3 MR. PYBURN: Steve Pyburn, Federal Highway  
4 Administration. And first I want to point out this -- this  
5 issue is before you because it's a situation where Federal  
6 Highway actually listened to state DOTs, understood there was a  
7 problem, and tried to fix it. That should be noted.

8 I agree with Mr. Fisher that I think the language is  
9 a little bit too liberal. It swings the pendulum back a little  
10 bit too far in giving too much latitude. The federal  
11 definition of engineering judgment and engineering study I  
12 think is not -- it doesn't really fit California's laws for  
13 professional engineers as defined in the Professional Engineers  
14 Act. And I believe that those definitions for California  
15 should say that the should be done under the -- the guidance --  
16 or under the responsible charge of a licensed engineer  
17 qualified to practice that particular branch of engineering.  
18 That puts the California requirement of licensing and  
19 operations of what happens in the public right-of-way under a  
20 licensed engineer.

21 And, two, the -- I would also suggest for California  
22 that the study and other documentation be stamped by a licensed  
23 engineer qualified to practice in that field.

24 CHAIR ROBINSON: Thank you. Anyone else?

25 Seeing none, we'll bring the conversation back into

1 the committee. Thoughts? Hamid.

2 COMMITTEE MEMBER BAHADORI: Mr. Chairman, we just  
3 spent about an hour discussing whether the clearance, the edge  
4 clearance of a blank-out blinking sign should be one-eighth of  
5 an inch or three-quarter of an inch, or what is the standard,  
6 or what is compliance with the standard. And we do so many  
7 similar discussions on so many different technical engineering  
8 standards.

9 If we have language in the manual that so loosely, so  
10 liberally allows deviation from those standards with no  
11 documentation whatsoever, why do we do that? If -- if we can  
12 have language in there that says not only an engineer but  
13 somebody who works under the supervision of an engineer can get  
14 out there and he or she doesn't even need to have an  
15 engineering degree, forget not being licensed or anything, and  
16 gets out there and an agency is allows perfectly legally,  
17 according to this document, according to MUTCD to use the  
18 observation of that individual in the field or even in his  
19 office as the basis for deviation from the standards, and  
20 there's no need for documentation whatsoever, then what is the  
21 point of having the standards? That's the question.

22 And what harm does it possibly cause when -- and I've  
23 shared with you six, seven, eight agencies that have replied  
24 back to me, and another agency, City of Santa Monica, that just  
25 also said that they documented. And Caltrans has a 14-page

1 chapter telling people, their own staff, how to document design  
2 deviations.

3           If everybody is doing it, what is the harm of putting  
4 language that says when -- the engineering study, if you'd go  
5 back to that section please, Mr. Bhullar, the engineering  
6 study, we say that it must be in writing. But when you say  
7 engineering judgment, there is no requirement for documentation  
8 whatsoever.

9           CHAIR ROBINSON: In fact, it states that it's not  
10 required.

11           COMMITTEE MEMBER BAHADORI: It does. It says not  
12 required. And then here in Paragraph 3 on page 10 we say,

13           "The decision to use a particular device or a  
14           particular location should be made on the basis of  
15           either an engineering study or an the application  
16           of engineer judgment,"

17 Which means that the whole manual is pretty much out the door,  
18 just do as you wish. So I don't see what is the harm in  
19 inserting what Mr. Fisher suggested, the language that says put  
20 it in writing.

21           CHAIR ROBINSON: Mark.

22           COMMITTEE MEMBER BAHADORI: How they put it in  
23 writing, what level of writing, what level of documentation is  
24 up to each agency.

25           COMMITTEE MEMBER GREENWOOD: I hear the concerns are

1 largely revolving around testimony in court and depositions,  
2 and -- and the reaction being that if we require cities to  
3 provide more engineering they will somehow be protected. I  
4 think the opposite will -- will occur. If we require cities to  
5 provide more documentation than they are or they may be and  
6 they fail to, which they will, they are now absolutely trapped  
7 in that they have not risen to the -- to the requirement of the  
8 manual.

9           Now, the Federal Manual is good enough for 49 other  
10 states, 90 percent of the population. And I fail to see why  
11 California is so special that we need additional language  
12 beyond the Federal Manual.

13           CHAIR ROBINSON: Okay. Jeff?

14           COMMITTEE MEMBER KNOWLES: Yeah, I can't agree more  
15 strongly with what was just said. Because, let's see, I've  
16 worked -- I'm with my seventh agency right now. And when you  
17 come to a new agency you're inheriting the past practices. And  
18 not everything that's on the ground has been documented as to  
19 exactly why it's on the ground. So why would you make a new  
20 standard when you know engineers occasionally don't follow the  
21 standard, but this new standard is just going to nail them to  
22 the wall when it comes to any collision involving some past  
23 deviation that wasn't documented ten years ago, and that the  
24 new engineer creatively worked with attorneys to try to protect  
25 the city? But, I mean, this would make my job so much more

1 difficult.

2           Now, there's no question that the intent is really  
3 good, to encourage local agencies to document deviations to  
4 standards. There's no question. But the harm this would  
5 create would be just enormous for local agencies. I could not  
6 support anything that -- that had that additional language in  
7 it.

8           COMMITTEE MEMBER BAHADORI: May I ask a question?

9           CHAIR ROBINSON: I'm going to make a statement right  
10 now, then you can.

11           I, in preparing for this, had a long conversation  
12 with our county counsel. Because for a long time I was feeling  
13 that it was a great idea to document everything that we could.

14           And he said, "Mike, you can go either way you want,  
15 you know, but you're going to have -- it's not going to be a  
16 panacea either way. It's not going to be perfect." He said,  
17 "You can -- you can require documentation. But inevitably  
18 something is going to get fouled up and it's not going to be  
19 correct. There is the potential that if you require  
20 documentation, then there is a question of what is sufficient  
21 documentation. What -- you're calling into question the  
22 thoughts of the engineer at that time. And then you're --  
23 you're able to question that."

24           You can -- it -- he actually went a lot further,  
25 identifying you're going to end up creating standards for the

1 documentation. And it kind of opened my eyes to that, what --  
2 what will we need ultimately, should we decide that we're going  
3 to require documentation for deviation from the standard?  
4 What -- how long will we need to keep it? Where will it be  
5 kept? How will you guarantee that it's going to be there  
6 when -- when you're going to need it? All these things are --  
7 would need to be addressed, along with a requirement for  
8 documentation.

9           My agency does. In fact, my agency is one of the  
10 ones that responded to Hamid. We -- we have our own method of  
11 doing it. We have a form. We want to make sure that we're --  
12 we're complete in our thought process so that we don't perjure  
13 each other as engineers. Because it's not -- like somebody  
14 mentioned before, you know, engineers retire, engineers die.  
15 Ultimately that person who made the -- who approved the  
16 deviation is not going to be there.

17           And it's going to be incumbent on somebody, like Jeff  
18 said, who comes in new that will have to pick up that -- that  
19 standard and run. If he has some information that would clue  
20 him into the thought process that the old -- that the old  
21 engineer who left, what he was going through and what -- what  
22 he used to decide what he did, it would help. But it -- it  
23 doesn't mean that he's going to -- he's going to be thinking  
24 that way himself. So either way we go we're -- we're closing  
25 some doors and we're opening some doors. And I just wanted to



1 share that with the -- with the committee.

2 I also -- I asked him, you know, if you're going to  
3 have -- if we were going to put something down here in the  
4 book, what -- what would it say, what should it say? And so  
5 here's what our counsel said.

6 "When an engineering study of the application  
7 of engineer judgment indicates that site-specific  
8 conditions at a particular location make compliance  
9 with design standards impractical, an agency may  
10 deviate from that design standard at that location.  
11 When a design standard is not followed at a  
12 particular location the fact that engineering  
13 judgment has been used to arrive at a reasonable  
14 non-standard alternative should be documented,  
15 included in the plan approval process, and  
16 preserved with the project plans."

17 It still leaves open the level of documentation.

18 COMMITTEE MEMBER BAHADORI: Yeah. But it still says  
19 it has to be documented, as even your own counsel is  
20 recommending to document.

21 CHAIR ROBINSON: No. That's when I pressed him for  
22 something.

23 COMMITTEE MEMBER JONES: Isn't that attorney-client  
24 privileges?

25 CHAIR ROBINSON: Did you have another question,

1 Hamid?

2 COMMITTEE MEMBER BAHADORI: The question was that you  
3 mentioned -- you keep mentioning that when engineers design --  
4 deviate from design standards. And like Jeff said, that he's  
5 worked seven different agencies. And how many times really did  
6 you have to go and consciously deviate from design standards?  
7 All of us in our careers, maybe we can count it on one hand or  
8 at most two hands that we have faced those conditions. It's  
9 not a daily activity. It's not going to be such a burden that  
10 Staff has to sit around and write reports all day why they are  
11 deviating from design standards.

12 But the way that we have it now, we have vertical  
13 clearance requirements for installation of signs on the street.  
14 Why do we have that? Any agency can mount the roadside signs  
15 at any height they want. Because the people who install it in  
16 the field, they work under supervision of a registered engineer  
17 and they decide, oh, well, I think five feet is enough here.  
18 I'm not going to stay with the seven feet. And it's perfectly  
19 legal. All I'm saying is it makes a mockery of the whole  
20 manual and the standards if you leave it that loosely open for  
21 interpretation, and no need for documentation whatsoever.

22 I think what the -- what our chairman read, the  
23 advice from their legal counsel, I'm perfectly fine with that  
24 language, with adding that last language, that last sentence.

25 SECRETARY SINGH: It's a should statement.

1 CHAIR ROBINSON: It is a should statement.

2 COMMITTEE MEMBER BAHADORI: Yeah, that's fine.

3 Something that says -- that doesn't say that anybody who works  
4 under supervision of and engineer can go out there and throw  
5 away the standards and just say, oh. And then you ask, why did  
6 you do it? We don't know. It was engineering judgment. Who  
7 made the decision? We don't know. He's not here. He's  
8 retired.

9 COMMITTEE MEMBER KNOWLES: I mean, that is, in my  
10 opinion, and exaggeration. So, yes, I can't say that every day  
11 I go to work I deviate from standards or something. But if you  
12 go to work for a city that's more than 100 years old --

13 COMMITTEE MEMBER BAHADORI: Yeah.

14 COMMITTEE MEMBER KNOWLES: -- you've got a century of  
15 deviations, you've got a century of changing standards. You  
16 quite often have, you know, hundreds of pages of missing  
17 documentation. But no -- if we're in a court case, you have to  
18 come -- still have to come up with a logical explanation for  
19 why things are the way they are, why you maybe haven't done  
20 some remedial action at the location. It's not just throwing  
21 out the standards.

22 COMMITTEE MEMBER BAHADORI: Yeah. But you know that  
23 these things, when you go through subpoenas and interrogatories  
24 and reports, what -- if you inserted in the manual today, they  
25 can not hold you responsible for work that was done ten years

1 ago, or even yesterday --

2 COMMITTEE MEMBER KNOWLES: So --

3 COMMITTEE MEMBER BAHADORI: -- that this is not  
4 proactive. That -- your counsel is going to tell you, they  
5 pull the manual and say, okay, Caltrans put this in the manual  
6 in July of 2013. Therefore, it doesn't apply to the project  
7 that was done in 1975. You have that protection. It's just  
8 making it right from here on. We are not going to try to fix  
9 something that happened in 1930, obviously.

10 COMMITTEE MEMBER KNOWLES: But the way the attorneys  
11 use a statement like this, I mean, we'll have a collision where  
12 there's a few raised pavement markings missing. And you've got  
13 a standard for what that layout is, but the attorneys want  
14 documentation on who first noticed the missing raised pavement  
15 markers, you know, did you practice due diligence in replacing  
16 them? I mean, how much do you get down to the --

17 COMMITTEE MEMBER BAHADORI: Yeah. But that's --

18 COMMITTEE MEMBER KNOWLES: -- standard itself?  
19 Anyways, again, that statement, good intentions, but there's no  
20 way I could vote to support something that added anything  
21 beyond the language already proposed by Caltrans in terms of  
22 new language, additional language to what's in the federal  
23 document.

24 COMMITTEE MEMBER BAHADORI: Then do you -- do you  
25 also agree that the language the way it is now, anybody can

1 deviate for any reason --

2 COMMITTEE MEMBER KNOWLES: No.

3 COMMITTEE MEMBER BAHADORI: -- without documentation?

4 COMMITTEE MEMBER KNOWLES: No. No.

5 COMMITTEE MEMBER BAHADORI: Why not?

6 COMMITTEE MEMBER KNOWLES: In the practical --

7 COMMITTEE MEMBER BAHADORI: No, no.

8 COMMITTEE MEMBER KNOWLES: Because you'd be --

9 COMMITTEE MEMBER BAHADORI: In practice that's true.

10 But in writing, in -- what the manual says, anybody working

11 under supervision of an engineer can deviate from any standard

12 for any reason, and they don't even have to explain why they

13 did it.

14 COMMITTEE MEMBER MARSHALL: Mr. Chairman, I think the

15 answer to that point is what Steve Pyburn brings, that another

16 law that we're all operating under is the Professional

17 Engineers Act. And it can't be just any employee acting

18 independently just because you happen to be their boss. The

19 engineer still has to be in responsible charge of the work.

20 And that -- that's what makes me comfortable with that specific

21 aspect of Hamid's concerns.

22 CHAIR ROBINSON: But I believe the -- the description

23 under engineering judgment did not say in responsible charge.

24 COMMITTEE MEMBER BAHADORI: No.

25 CHAIR ROBINSON: It just said working for an

1 engineer.

2 COMMITTEE MEMBER MARSHALL: I appreciate that. But I  
3 live in the State of California and work as a California  
4 Registered Professional Engineer, and also have to comply with  
5 that other state law. I don't think every state law needs to  
6 separately duplicate the other things in law that also apply.

7 CHAIR ROBINSON: No. What -- what I'm pointing is  
8 where we've got engineering judgment, you've got the  
9 engineering study, those two could be written more similarly so  
10 that they -- so that they identify that responsible charge to  
11 eliminate under un-clarity. That's -- that was the point that  
12 I was making.

13 I don't -- I don't like the fact that it specifies  
14 that -- that documentation is -- is not required. I would  
15 prefer to say documentation is encouraged. Rather than --  
16 rather than give a person an out, I would rather make a person  
17 think about what he should be doing.

18 Any other thoughts?

19 COMMITTEE MEMBER KNOWLES: Well, but why in, you  
20 know, in litigious California do we need to raise the bar so  
21 high for the local agencies? Here you have a federal document  
22 that set the standard for most states and all the agencies in  
23 those states, and we already have, you know a sue-happy state  
24 here. I mean, why make it that much more difficult on our  
25 local agency? If this is good enough for most of the country,

1 why are you doing this to our local cities and adding this  
2 burden to us? If this is good enough for most of the country,  
3 why? I don't understand the problem you're trying to solve by  
4 this additional language to make our manual thicker and thicker  
5 and thicker.

6 COMMITTEE MEMBER BAHADORI: No, no. This is not -- I  
7 understand your point. But you have a 700-page Federal Manual.  
8 We added already 400 pages because we said this is California;  
9 we are not the rest of the country. Adding one sentence at the  
10 end of a paragraph is not going to thicken the manual.

11 COMMITTEE MEMBER MARSHALL: Mr. Chairman?

12 CHAIR ROBINSON: Rick.

13 COMMITTEE MEMBER MARSHALL: I have a question on  
14 somewhat different detail. I would like to hear back from  
15 either Mark or Jeff regarding the question about option one  
16 versus option two in what's proposed. One speaker identified  
17 that they felt that option two was their choice. But in the  
18 context of what both Mark and Jeff have said in our discussion  
19 I'd like to have -- I'd like to hear their thoughts on this  
20 point.

21 CHAIR ROBINSON: Mark, do you care to comment?

22 COMMITTEE MEMBER GREENWOOD: To tell you the truth I  
23 hadn't really -- I don't see that much difference between the  
24 two.

25 COMMITTEE MEMBER KNOWLES: Well, I mean, the main

1 advantage that I like about option one, which includes 3A, is  
2 that it actually uses the phrase about unusual site-specific  
3 conditions, and so -- which didn't appear in any of the other  
4 language that I noticed in the section. So it seemed  
5 appropriate that you are calling out the fact that there's  
6 something unusual here.

7 COMMITTEE MEMBER MARSHALL: Yeah.

8 COMMITTEE MEMBER KNOWLES: It's not just a run-of-  
9 the-mill location.

10 COMMITTEE MEMBER MARSHALL: Okay.

11 COMMITTEE MEMBER KNOWLES: So I prefer option one.

12 COMMITTEE MEMBER GREENWOOD: And I agree. I think  
13 Paragraph 03A is better than 02B.

14 COMMITTEE MEMBER BENTON: To help distinguish between  
15 it, the two options are just representing, do we want to keep  
16 that paragraph which in the options called 3A, or do we want to  
17 remove it? That's the question. That's the -- the distinction  
18 of those two options is do we still want to keep it or do we  
19 want to remove it?

20 COMMITTEE MEMBER GREENWOOD: Well, my opinion is I  
21 want to revert to the federal language and call it a day.

22 COMMITTEE MEMBER BENTON: So that would be option  
23 two.

24 COMMITTEE MEMBER GREENWOOD: That would be option  
25 two.



1 CHAIR ROBINSON: I'm trying to come up with  
2 something. It seems like we're pretty split on this. And I  
3 don't know that putting a motion before -- before this  
4 committee right now is going to do anything.

5 COMMITTEE MEMBER KNOWLES: After all -- well, I'd  
6 like to give it a try --

7 CHAIR ROBINSON: Feel free.

8 COMMITTEE MEMBER KNOWLES: -- just to move forward.

9 So I move that we -- that we approve Caltrans's  
10 recommendation, including option two. Based on what I've just  
11 heard I can live with option two. So I put -- I recommend --  
12 let me make the motion that we approve Caltrans's  
13 recommendation and include option two in that recommendation.

14 CHAIR ROBINSON: Is there a second?

15 COMMITTEE MEMBER GREENWOOD: I'll second.

16 CHAIR ROBINSON: Okay. We've got a motion and a  
17 second to approve the Caltrans recommendation and include  
18 option two, which is to eliminate Paragraph 03A.

19 COMMITTEE MEMBER BAHADORI: Mr. Chairman, I would  
20 like to request a roll call please.

21 CHAIR ROBINSON: All right. First we have  
22 discussion. We have a motion and a second. Anybody care to  
23 comment on that? Okay.

24 Seeing none, then call for the question. All in  
25 favor of the motion, which is to --

1 COMMITTEE MEMBER BAHADORI: I asked for -- I asked  
2 for a roll call.

3 CHAIR ROBINSON: A roll call. Okay. Those who --  
4 let's see, we'll start down with -- with Mark then. In favor  
5 of the motion you would be approving the Caltrans  
6 recommendation with option two which eliminate 03A.

7 COMMITTEE MEMBER GREENWOOD: Right. I'm an aye.  
8 Yes.

9 COMMITTEE MEMBER OLENBERGER: Aye.

10 CHAIR ROBINSON: Aye?

11 COMMITTEE MEMBER BENTON: Yes.

12 CHAIR ROBINSON: Yes.

13 COMMITTEE MEMBER RICKS: I said, yes.

14 COMMITTEE MEMBER BAHADORI: Oh, no.

15 COMMITTEE MEMBER KNOWLES: Yes.

16 COMMITTEE MEMBER MARSHALL: Yes.

17 COMMITTEE MEMBER JONES: Yes.

18 CHAIR ROBINSON: Okay. So -- we've got -- we've got  
19 one dissenting vote.

20 SECRETARY SINGH: Eight -- eight to one.

21 COMMITTEE MEMBER KNOWLES: You're welcome.

22 CHAIR ROBINSON: That was painful.

23 COMMITTEE MEMBER KNOWLES: Absolutely.

24 CHAIR ROBINSON: Something tells me this is not over.  
25 All right. That -- that handles all of our items on the public

1 hearing.

2           And we'll -- and so we'll go into request for  
3 experimentation. Item 13-01 is a request to experiment with  
4 green and shared roadway bicycle markings. It's proposed by  
5 the City of Oakland.

6           And, Jeff, you were sponsoring that.

7           COMMITTEE MEMBER KNOWLES: Yeah. So we just need a  
8 moment to get the PowerPoint put together. And then a  
9 representative from the City of Oakland is going to make a  
10 presentation on the proposal.

11           CHAIR ROBINSON: And, Jeff, understand that we have  
12 FHWA approval already on this.

13           COMMITTEE MEMBER KNOWLES: Yes. So is that right?

14           MR. PATTON: That's correct.

15           COMMITTEE MEMBER KNOWLES: Yes.

16           MR. PATTON: I'm Jason Patton with the City of  
17 Oakland. And I have a presentation of about 12 slides, if  
18 that's the pleasure of the committee.

19           MR. PYBURN: Now, what you have is back and forth,  
20 and a green pointer.

21           MR. PATTON: So side to side and a green pointer.

22           MR. PYBURN: So you have a green pointer, and you can  
23 go forward and backward.

24           MR. PATTON: Great.

25           MR. PYBURN: Forward, backward.

1           MR. PATTON: Thank you. Again, I'm Jason Patton with  
2 the City of Oakland. Thanks for the opportunity to present to  
3 the committee this morning. We are -- have a request to  
4 experiment with green pavement in conjunction with the shared  
5 roadway bicycle marking in Oakland. And I want to walk you  
6 briefly through what we are proposing to do. I'm going to  
7 present the problem statement and the experiment location, talk  
8 about the project history, which is actually a fairly long  
9 history which I'll try and make short for you, discuss in  
10 detail the proposed treatment and the state of the practice,  
11 and also talk in detail about our proposed evaluation plan.

12           The problem statement is specifically with multi-lane  
13 urban streets without bicycle lanes. And in particular, I want  
14 to exercise collectors and arterials, of which Oakland has  
15 many, typically two lanes per direction of maybe fairly modest  
16 by kind of statewide collector arterials. But we have -- we do  
17 have a fair amount of four lane collectors and arterials in a  
18 very urbanized area where bicycle lanes, for one reason or  
19 another, aren't feasible.

20           And the problem we are encountering in dealing with  
21 the growing demand for bicycling we have locally is that  
22 generally bicyclists ride too close to parked vehicles, and  
23 they do that in general because of the threat of overtaking  
24 collisions, the threat of being hit from behind. Drivers tend  
25 to pass bicyclists by squeezing by. You see in the picture in

1 the upper left corner where there's a significant amount of  
2 lane width there that looks readily available to a driver.  
3 This leaves and insufficient amount of space for the bicyclists  
4 to safely operate. And the driver may also encroach into the  
5 adjoining travel lane by not having made a deliberate pass by  
6 changing lanes.

7           Additionally, bicyclists who do control the right-  
8 hand lane riding further out, to protect themselves from doors  
9 or drivers exiting from driveways or pedestrians stepping off  
10 the curb, are subject to intimidation by drivers. And this is  
11 something that we've seen a fair amount of locally and are  
12 trying to understand how to communicate the intent of a shared  
13 lane more strongly so as to address that intimidation and  
14 promote the safe operations for all roadway users.

15           This is the location of the experiment. It's 40th  
16 Street in North Oakland near MacArthur BART. It's a four-lane  
17 arterial roadway with an 80-foot cross-section. Mid-block it  
18 has a 16-foot median that narrows to 4 feet at -- on  
19 intersection approaches to make room for the turn pockets. The  
20 lane line stripe you see in the upper left is 20 feet from face  
21 of curb, leaving a 12-foot inside lane and 20 feet of unmarked  
22 space for the number 2 lane and the parking lane.

23           For a sense of context of what we're trying to  
24 achieve, you'll see MacArthur BART in the center. The 40th  
25 Street corridor running to left and right, east and west. At

1 the right most extreme is the -- Kaiser Hospital, Oakland,  
2 large medical facility, and the Piedmont Avenue commercial  
3 district. And at the left is the City of Emeryville, and what  
4 will be the approach to the -- the non-motorized approach to  
5 the new eastern span of the Bay Bridge. MacArthur BART Will be  
6 the closet BART station to the new eastern span. And we expect  
7 fairly high levels of demand once that span opens.

8           Running north-south we have fairly good existing  
9 bikeway connectivity. The existing bikeway is shown in colored  
10 lines, with UC Berkeley off the map to the top, and downtown  
11 off the map to the bottom.

12           In terms of Oakland's overall mode share, bicyclist  
13 mode share, this area of North Oakland has amongst the -- the  
14 higher mode shares, and it's -- and it is growing. So we're  
15 looking for ways to accommodate that. And this -- this  
16 corridor has come up since -- we've been working on this  
17 corridor since 2006.

18           And for, you know, reasons of network connectivity,  
19 it may be clear based on this diagram, but we have very good  
20 north-south connectivity using the streets radiating out from  
21 Downtown Oakland's historical hub and spoke street grid, but  
22 very limited cross-town connectivity. And here in particular  
23 we have MacArthur BART as a major generator with eight percent  
24 of BART patrons accessing the station by bicycle as of 2008.  
25 And that places MacArthur BART 4th out of the 43 BART stations

1 in the Bay Area in terms of bicyclists' use.

2           So the project history, as I mentioned, we've been  
3 working on this project since 2006. And originally the  
4 proposal was to remove travel lanes and accommodate the  
5 bicyclists' demand by converting a travel lane to bicycle  
6 lanes. And so we went ahead and did a traffic study of that  
7 looking at intersection level service and found the project to  
8 be feasible out through the 2025 future year.

9           We were subsequently confronted by our bus operator,  
10 AC Transit, the Alameda-Contra Costa -- Alameda-Contra Costa  
11 Transit District, with concerns over potential -- potential  
12 issues with bus delay because of the lane reduction project.  
13 This is an ongoing issue we have with AC Transit trying to  
14 accommodate both bicyclists and large volumes of busses on  
15 Oakland streets. And because of that hub and spoke grid that I  
16 mentioned earlier, we tend to end up on the same roadways  
17 because we don't have parallel streets whereby we can easily  
18 separate different users onto different streets.

19           So in acknowledgment of AC Transit's concern we  
20 decided to do a second feasibility study, again looking at the  
21 intersection level of service, but also doing a micro-  
22 simulation of a corridor using the VisSim simulation package to  
23 try and get a better handle on travel times and delay.

24           While this was happening the -- the future forecast  
25 used by the countywide travel demand model changed from the

1 2025 to the 2030 scenarios. And the -- the 2030 -- the 2030  
2 scenario is the first one in the Bay Area to use the new,  
3 rather aggressive in-fill development targets. So the traffic  
4 volumes went through the roof. And we have all kinds of  
5 intersections failing in 2030, according to Oakland's  
6 thresholds, with the lane reduction. So that kind of put an  
7 end on that for the time being, even though the project worked  
8 under the 2025 scenario previously.

9           We had a condition where the city's own document  
10 showed congestion in the future. It becomes very hard to  
11 explain where that congestion is coming from because of the  
12 2030 scenario. And so we looked at other options, namely could  
13 we narrow that median, 16 feet mid-block, 4 foot plus turn  
14 pocket at the intersection approaches? And we were fairly far  
15 along on that, including a quarter million dollar grant to do  
16 design work for the median narrowing, a non-trivial project  
17 because of antiquated traffic signal equipment in the median  
18 that would need to be -- needed to be relocated to the shoulder  
19 with mast arms.

20           While we were doing -- while we were beginning this  
21 work a neighborhood group landscaped the medians without city  
22 permission or approvals. And basically the -- the housing  
23 market was starting to crash. There were a bunch of people who  
24 had bought kind of at the wrong time, and they were trying  
25 to -- this median was the -- where they were drawing the line



1 and going to take -- take back their neighborhood. And so I  
2 became the one -- we became the one -- this project became the  
3 project that was going to kill their neighborhood. So the  
4 median narrowing project died.

5           And so that left us with could we do something  
6 different? Could we -- could we -- could we work with the  
7 existing roadway cross-section and look at this issue of shared  
8 lanes in denser urban areas. And we're particularly interested  
9 in this experiment because of its potential applicability to  
10 other locations in Oakland. We have a limited number of  
11 locations that we've -- based on some citywide policy work of  
12 looking, if we were to take this approach what would the extent  
13 be? And we've identified a collection of segments that total  
14 about five miles in length that could be candidates if we were  
15 -- if we were to move forward on this and -- and achieve  
16 favorable results.

17           So then what we're proposing to do -- here's a snip  
18 of the striping plan from 40th Street -- is to maintain the  
19 existing lane configuration and curb lines, add sharrows and  
20 parking edge line stripe -- and we have internal design  
21 guidance that we always use the parking edge line stripe in  
22 conjunction with the sharrow -- include the relatively Bicycle  
23 May Use Full Lane sign, and then highlight the sharrow  
24 treatment with a five-foot wide band of green pavement centered  
25 in the number two travel lane.

1           And the purpose of that treatment would be to  
2 communicate safe and legal bicyclist positioning, and to  
3 promote safe passing by overtaking drivers. We're trying to  
4 look at it wholistically about how -- we have this general  
5 operational issue on these roadways where the bicyclist lanes  
6 are such that it's becoming disruptive to the overall roadway  
7 operations, both in terms of bicyclists either putting themself  
8 in harm's way or not having sufficient space to operate, and  
9 then drivers, some drivers making dangerous passes, passes when  
10 it's not safe to do so. So trying to take this on at both  
11 levels.

12           We also have a number of instances of bicyclists  
13 passing on the right at traffic signals, and trying to see,  
14 could this get a handle on that? Could we get better queuing  
15 by bicyclists at traffic signals and less passing on the right  
16 that then creates conflicts in the intersection when the light  
17 goes green?

18           The corridor is a mile long. It has seven traffic  
19 signals and about 16,000 ADT currently, and a posted speed  
20 limit of 30 miles per hour.

21           In terms of the state of the practice, we believe  
22 that Salt Lake City, Utah was the first to do this on a short  
23 stretch in their downtown as of 2008. But more recently and  
24 maybe more relevant is what the City of Long Beach has done.  
25 On a street that geometrically is very comparable to 40th

1 Street, although I understand it to be a significantly slower  
2 street due to friction, namely higher traffic volumes, more  
3 parking turnover, which leads to a generally slower street.

4           We're proposing to do a phased before and after study  
5 with three phases, the first being the existing condition  
6 which -- and then adding the standard treatments, that would be  
7 the sharrows, the parking edge line stripe, and the -- the  
8 Bicyclists May Use Full Lane signs, allowing a six-week  
9 settling in period, and then collecting data, which I'll talk  
10 about in a moment. Then coming back to actually remove the  
11 sharrows in order that we can put down this green band, and  
12 then put the sharrows back on top of the green band, allowing a  
13 six-week settling in period, and then doing another round of  
14 data collection.

15           The data collection we're proposing is fairly  
16 intensive. We're proposing to look at basically the entirety  
17 of one segment of the roadway between two traffic signals is an  
18 850-foot segment between those signals, and with 10 video  
19 cameras, 5 cameras per direction of travel which will allow us  
20 to have continuous video coverage of that 850-foot segment  
21 between the signals.

22           Those cameras, as we understand it, can collect up to  
23 24 hours of data per phase. We're proposing to analyze six  
24 hours per phase for budgetary reasons, but to collect all the  
25 data we can given the technical capacity of the cameras. So in

1 total then we would have 60 hours of video footage per phase,  
2 but there would ultimately be 240 hours of data available.

3           We're also proposing to use pneumatic tubes fairly  
4 significantly, first for -- to understand vehicle volumes by  
5 lane and speed by lane. But then there's also a relatively new  
6 pneumatic tube technology that can differentiate bicyclists  
7 from vehicles. And so we're proposing to use these tubes, not  
8 only on 40th Street but on the -- the nearest through-street on  
9 either side of 40th Street to get a sense of how volumes are  
10 changing on 40th, as well as in the parallel streets. All of  
11 the tube data would be for one week for each phase.

12           And what we're trying to understand through this  
13 phased before and after study is specifically what kind of  
14 benefit do we get out of the standard treatments? I think  
15 there's a number -- I think there's a lot to be learned from  
16 that study of the standard treatments in understanding how  
17 they're performing. And then specifically in a very straight  
18 comparison, how do the standard treatments compare with this  
19 heightened treatment, and is the heightened treatment worth it,  
20 both in terms of adding a new tool to the toolbox, and also in  
21 terms of the added cost and maintenance of doing this kind of  
22 work.

23           Specifically, the measures of effectiveness we're  
24 looking at are volumes, what's happening with the bicyclist  
25 volumes, and also the vehicle volumes, particularly the vehicle

1 volumes by lane. We don't expect the vehicle volumes to change  
2 significantly on the street because there aren't particularly  
3 through-routes. This is the route you use if you're going to  
4 go there.

5           What are bicyclists doing in terms of their lane  
6 positioning, both at mid-block and intersection approaches? I  
7 mentioned earlier that issue of bicyclists passing cars on the  
8 right at the red light, and then getting into trouble trying to  
9 merge back into the lane through the intersection.

10           What kind of space are -- are drivers giving  
11 bicyclists when they pass? Is that increasing? And is that  
12 increase in passing distance leading to safer and more  
13 deliberate lane changes as opposed to the squeeze-by pass?

14           What is happening with vehicle speeds by lane?

15           And then specifically, what is happening with bus  
16 operations as in our ongoing work with AC Transit to try to get  
17 bus operations and bicycle usage to coexist.

18           And then, of course, collisions on a longer  
19 timeframe, one-year before and after data.

20           We presented the request to the California Bicycle  
21 Advisory Committee back in December. I believe they met on the  
22 same day that this body met in Santa Cruz. And we received a  
23 favorable response from CBAC. We received our FHWA approval in  
24 January. And with the support of this committee we intend to  
25 run the experiment over spring-summer to -- to conclude before

1 the -- to conclude end of summer, early fall before the --  
2 before the evening peak starts going into darkness.

3 And so the -- as proposed the majority of the  
4 experiment would be -- the actual phasing and the data  
5 collection would be entirely done in 2013. We expect that most  
6 of the analysis would be done in early 2014, although because  
7 of waiting for the -- the after timeframe for the collisions  
8 and for those to become available it's probably looking at the  
9 latter part of 2015 before we can do conclusive analysis of the  
10 collisions.

11 And with that I welcome your questions and comments.

12 CHAIR ROBINSON: Well, I'll start off. Very, very  
13 nice presentation. Very complete.

14 MR. PATTON: Thank you.

15 CHAIR ROBINSON: I couldn't come up with any  
16 questions.

17 COMMITTEE MEMBER KNOWLES: I always have a few.

18 SECRETARY SINGH: We're going to put your next  
19 proposal as a sample of our website so that agencies can  
20 follow.

21 CHAIR ROBINSON: Devinder just -- just shared with me  
22 his note, "This is a good sample to the group for the agencies  
23 to follow." So outstanding.

24 Any questions? Jeff?

25 MR. PATTON: That was the good news. Now, let's see

1 what else we got.

2 COMMITTEE MEMBER KNOWLES: No. The presentation -- I  
3 just had a couple clarifying questions.

4 MR. PATTON: Please.

5 COMMITTEE MEMBER KNOWLES: So when you talked about  
6 the different phases and standard application, standard, what,  
7 is the edge lines and the sharrows?

8 MR. PATTON: Standard is the, yeah, the parking edge  
9 line stripe, the three-inch detail 27B, plus the sharrows, plus  
10 the Bicyclists May Use Full Lane regulatory signs.

11 COMMITTEE MEMBER KNOWLES: Okay. With those signs.  
12 And as in the Long Beach study, they were having problems with  
13 cyclists on the sidewalk. So in your volume analysis -- first,  
14 do you have cyclists on the sidewalk, and is that going to be  
15 part of your analysis?

16 MR. PATTON: We will be able to capture that. The  
17 problem is significantly less significant.

18 COMMITTEE MEMBER KNOWLES: Okay.

19 MR. PATTON: The sidewalks are -- are quite narrow,  
20 making it impractical to ride on the sidewalk. And we don't  
21 have those kind of -- that kind of intensity of commercial uses  
22 like in the Long Beach --

23 COMMITTEE MEMBER KNOWLES: Uh-huh.

24 MR. PATTON: -- instance that would have people kind  
25 of coming on and off the sidewalk.

1 COMMITTEE MEMBER KNOWLES: But that -- with that  
2 narrowness you might have had some volumes on the sidewalk  
3 that --

4 MR. PATTON: I think it's --

5 COMMITTEE MEMBER KNOWLES: But you will study those?

6 MR. PATTON: Yes.

7 COMMITTEE MEMBER KNOWLES: Okay. Thanks.

8 MR. PATTON: That is included.

9 COMMITTEE MEMBER KNOWLES: Those are my only  
10 questions.

11 CHAIR ROBINSON: Anyone want to make a motion?

12 COMMITTEE MEMBER BAHADORI: I make a motion to  
13 approve the request for experimentation.

14 COMMITTEE MEMBER KNOWLES: But don't we hear from the  
15 public?

16 COMMITTEE MEMBER BAHADORI: Oh, you want to hear from  
17 public.

18 SECRETARY SINGH: The motion can be moved, then we --  
19 then we can ask people if they want to speak.

20 CHAIR ROBINSON: I think we should get the public  
21 comment. I just messed up.

22 MR. MILLER: You can't let -- Rock Miller. You can't  
23 let this item go through without listening to me talk about it.  
24 For the benefit of a lot of the commissioners, I was before  
25 this very body about three or four years ago with a very



1 similar project in Long Beach. And I don't know that much  
2 about this project, other than I've been waiting for three or  
3 four years to see some other cities try to do this.

4 I no longer work with Long Beach, so I can't speak in  
5 any official capacity about that project, but the city does  
6 consider it to be a success. And the impressions I've gotten  
7 talking with FHWA and other communities is it's really a  
8 question of will other communities be willing to try this  
9 treatment to basically build up a case for whether it does  
10 change the interaction between autos and bicycles.

11 And I think it's a great step and I really personally  
12 am very appreciative of the fact that Oakland has stepped  
13 forward and done this. And -- and I think this makes four  
14 cities in the country. I think FHWA is probably looking for  
15 somewhere in the order of 20 to 25 positive demonstrations  
16 before they would take it any further.

17 I would like to, through the committee, ask the  
18 applicant one question. How are we going to make the pavement  
19 green? Are we going to use paint or a coating or a colored  
20 asphalt?

21 MR. PATTON: Jason Patton, City of Oakland. We're  
22 proposing to use a proprietary material known as Street Bond  
23 which, as I understand it, is an epoxy material that's applied  
24 to the surface. The reason for that being is we looked at --  
25 there seems to be three categories of available materials out

1 there currently. On the one hand is paint which is affordable  
2 and not durable. On the other extreme is preformed  
3 thermoplastic which is highly durable and very expensive. This  
4 is in the middle supposedly, in terms of durability. We're  
5 trying to balance durability versus cost.

6           The other jurisdictions that we've queried in terms  
7 of their practices, we found that the paint is about \$1.00 a  
8 square foot, the preformed thermoplastic is about \$10.00 per  
9 square foot; this brings us in at about \$2.00 a square foot,  
10 which translates roughly to about \$100,000 a mile.

11           COMMITTEE MEMBER KNOWLES: Well, I have a follow-up  
12 question, and you have one at the far end too.

13           CHAIR ROBINSON: Okay.

14           COMMITTEE MEMBER KNOWLES: But -- so based on your  
15 research and picking this material, I mean, how is it -- you  
16 probably have a grant to do this project? I'm wondering how  
17 you see maintaining this over time if it were down, you know,  
18 in terms of how -- you know, we're kind of familiar with  
19 thermoplastic. How long does this last? What is -- what would  
20 normal maintenance be for a road surface like this to maintain  
21 that green?

22           MR. PATTON: Yeah, we don't know. And that's -- and  
23 actually, you know, aside from the experimental traffic control  
24 device we're interested in getting more familiarity with this  
25 green treatment in general. Because of the recent decision to

1 allow green in bicycle lanes, we're getting a lot of requests  
2 from our bike advocates for that. And we're -- we're not sure  
3 of the City of Oakland's ability to sustain that from a  
4 maintenance perspective. And we do have severe resource  
5 constraints.

6           And, you know, to the extent that we're paying \$10.00  
7 a square foot for this kind of treatment, I think it's out of  
8 our budget and we simply can't do it, except maybe in very  
9 particular choice locations. For \$100,000 a mile, if it lasts  
10 five or eight years, I think we can afford that. If it lasts  
11 two years, I'm not sure if we can afford that. So we are also  
12 going to need to go through that process of figuring out what  
13 we can sustain.

14           I was comforted by the analysis that -- that it looks  
15 like there may be five miles of eligible street in Oakland.  
16 Given some very rough citywide policy level guidance we put  
17 together, sustaining five miles may be something we could do.  
18 It would be a different world than trying to sustain 50 miles,  
19 for example.

20           CHAIR ROBINSON: Emma, did you have a question?

21           COMMITTEE MEMBER OLENBERGER: Yeah, I have a  
22 question. As a cyclist that would actually use this on my way  
23 to work in Emeryville from MacArthur, I just want to make sure  
24 that you guys have given consideration to the treatment of not  
25 being slick during wet and foggy weather conditions, and that

1 as the material degrades that it will still hold up and be safe  
2 for the cyclists using it.

3 MR. PATTON: Yes, we have. And that's the first --  
4 you know, after the, oh-wow kind of factor of using green,  
5 that's the second -- that's the second statement we get. And  
6 so we have done our due diligence there to understand what the  
7 manufacturer has done and the experience based on other  
8 jurisdictions. We believe this is not slippery under wet  
9 conditions, and we're moving forward on that assumption. If it  
10 is slippery we have a very significant issue that we need to  
11 address.

12 COMMITTEE MEMBER OLENBERGER: Great.

13 CHAIR ROBINSON: Thank you. Mr. Fisher?

14 MR. FISHER: John Fisher, former chair of the  
15 committee. First of all, I want to congratulate the City of  
16 Oakland for such a well-prepared proposal and study. And I  
17 think it should serve as a model for other cities to follow.

18 I support the findings of -- of this proposal. I  
19 support the -- the need to have something more obvious to tell  
20 bike users and motorists who expect to share the lane. I have  
21 one concern, though, and that is the use of green paint for the  
22 shared lane.

23 And as you recall a few years ago, your committee  
24 approved green for bike lanes, designated bike lanes in San  
25 Francisco, I believe. Later on we approved the use of the

1 green color for a shared lane in Long Beach, and I believe I  
2 may have sponsored that proposal. And we thought let's try it,  
3 let's see what works. But ultimately the FHWA weighed in on  
4 this and they issued an interim approval that said you may use  
5 green paint for bike lanes. So now we're getting -- now  
6 they've waived in on this. Green paint means bike lane, not  
7 shared lane. And so agencies may go forward and paint their  
8 bike lanes green if they wish to and if they have the budget to  
9 maintain it.

10           My concern is that if we mix green in shared lanes  
11 and exclusive bike lanes it's going to be a confusing message  
12 to the bicyclists and to the motorists. If the motorists start  
13 seeing green paint used for shared lanes, when he encounters  
14 the green paint in an exclusive bike lane he may say, oh, it's  
15 okay to ride this, as well.

16           And so I think, you know, if there is a desire to use  
17 a color to make sure that motorists are aware to share the road  
18 with bicyclists, maybe there's a need for new color. I don't  
19 know what it would be, red, brown, blue, you name it. But  
20 green has to mean something, and green means exclusive bike  
21 lane.

22           It says in the report that green would have a general  
23 use, expect bicyclists. But I think the important point here  
24 is to protect bicyclists who are in an exclusive bike lane;  
25 that green paint means that. If we use it for shared lanes I

1 think it's going to cause confusion down the line.

2 MR. BAROSS: Hello again. This time I'm speaking as  
3 Vice Chair of the California Bicycle Advisory Committee. As  
4 was noted, Bicycle Advisory Committee for Caltrans had an  
5 opportunity to review the proposal and did bring it forward  
6 with a recommendation that you approve the experiment.

7 I would like to, as a segue, hope that the California  
8 Bicycle Advisory Committee recommendations make it into the  
9 agendas, if that possible.

10 Two other comments though. Following up on John  
11 Fisher's suggestion, I'm promoting plaid as a color. The risk  
12 of potential for confusion, certainly.

13 Also, some of us are proposing that -- or bringing to  
14 your attention that while we're in effect changing somewhat the  
15 culture of behavior in the roadway where motorists are now --  
16 we're trying to heighten their awareness that there are going  
17 to be other users in the roadway and they need to deal with  
18 them, that they are allowed to use that roadway. I think that  
19 if we're successful in our culture-change effort that the fact  
20 that the sharrows and the green paint fades away won't be a  
21 problem because we will have changed behavior back to what it  
22 was in the '30s when -- I wasn't here then -- back to the '30s  
23 when motorists and bicyclists and people on horses, equestrians  
24 and carriages were sharing the road successfully.

25 One other point, though, I get involved, as the

1 republicans do, with messaging. The presenter was talking  
2 about drivers and he meant motorists. Bicyclists are also  
3 drivers. And in some senses we drive our vehicles more  
4 effectively and actually than motorists do who just put their  
5 foot down and aim them. So if -- when we're referring to users  
6 of the roadway if mean motorists I think we should use the term  
7 motorists. Thank you.

8 CHAIR ROBINSON: Mr. Royer.

9 MR. ROYER: Dave Royer, consulting engineer. I just  
10 want to address one thing. A concern that was brought up by  
11 one of your committee members was the friction factor. Years  
12 ago, and many years ago now, I was involved in a study with  
13 Caltrans where they evaluated friction factors on bike lane  
14 markings. And this was just the six-inch edge line. And what  
15 they found was that even paint, once it starts to lose its  
16 glass beads, becomes very slippery. Thermoplastic, if it's got  
17 glass bead sprayed on it, and it keeps its friction factor over  
18 its lifetime. So, actually, thermoplastic, older thermoplastic  
19 is far less slippery than -- than a painted material. That's  
20 because paint does not hold glass beads. It doesn't have to be  
21 glass beads. It can be also the ground glass and polished  
22 beads which is used on navy ships and things like that on  
23 walking surfaces.

24 But if they're not using a product that is going  
25 to -- a plastic-based, basically, that has a high adherence

1 factor to it, I have great concern that once it loses it's  
2 friction beads, and hopefully it's going to have glass beads in  
3 it or ground glass in it, once it loses that it becomes a very,  
4 very slippery surface, not only to bicycles, but a very  
5 slippery surface to -- to pedestrians. In fact, some agencies,  
6 I've known of many cases now over the years, some agencies  
7 decided on their crosswalks not to put glass beads in for  
8 whatever reason, and the pedestrians just slipped all over the  
9 place on it.

10           And then, also, automobile friction. Back when  
11 thermoplastic was first developed it was pretty slippery  
12 because they didn't put the top surface of glass beads. So  
13 automobiles would lock up their wheels when they went over the  
14 crosswalks and start skidding.

15           So whatever product is used it's got to be a very  
16 durable product with a friction enhancer, I'm sure, in there  
17 and -- and a product that will hold that friction enhancer  
18 throughout its entire life. Thank you.

19           CHAIR ROBINSON: Anyone else? Mr. Mustafa.

20           MR. MUSTAFA: I just want to make a comment about the  
21 green treatment. In front of city hall we've got about eight  
22 different types of products we installed last year, last June.  
23 And I just walked that strip yesterday and taking pictures and  
24 feeling the friction and how it looks like, because now we're  
25 going into continental crosswalk with the full intersection



1 being thermoplastic.

2           What I found to be very surprising was that two-part  
3 epoxy, and we have three types of two-part epoxy product out  
4 there -- one of them happens to be the same type that I used on  
5 my roof about 15 years ago -- the two-part epoxy held the best  
6 friction. I mean, the corundum that's in there, it was way at  
7 the base, whereas in some of the thermoplastic where we just  
8 apply the glass bead on the top kind of came off and the  
9 thermoplastic was pretty slippery. And the paint and the stain  
10 was in sad shape, as well.

11           So I think Oakland trying to use a two-part epoxy is  
12 a good product.

13           COMMITTEE MEMBER JONES: I'd like to recognize that  
14 our IT president is here in our presence. So thank you for  
15 coming.

16           CHAIR ROBINSON: Okay. Anyone else from the audience  
17 care to make a comment?

18           SECRETARY SINGH: That's good enough.

19           CHAIR ROBINSON: Then we'll bring it back in. Any  
20 additional comments? I know we have a motion and a second.  
21 Rick?

22           COMMITTEE MEMBER MARSHALL: I just had a question.  
23 We talked yesterday a little bit about the status of the Long  
24 Beach example. And I just wondered if there was any -- if  
25 anybody happened to remember any additional -- there was some

1 lack of clarity on whether that was still an active experiment  
2 or what?

3 SECRETARY SINGH: Still active.

4 COMMITTEE MEMBER MARSHALL: It's still active? Okay.

5 CHAIR ROBINSON: Anyone else?

6 SECRETARY SINGH: There was no motion. There was no  
7 motion.

8 CHAIR ROBINSON: There was not a motion?

9 SECRETARY SINGH: No.

10 CHAIR ROBINSON: Not a motion?

11 COMMITTEE MEMBER BAHADORI: No. I made the motion  
12 but there was no second.

13 COMMITTEE MEMBER JONES: I'll second it.

14 CHAIR ROBINSON: So there's a motion to approve the  
15 experiment by Hamid, and seconded by Bryan. Any additional  
16 comments? All in favor, raise your hand. Opposed? Unanimous.

17 COMMITTEE MEMBER BAHADORI: Mr. Chairman?

18 CHAIR ROBINSON: Hamid?

19 COMMITTEE MEMBER BAHADORI: Just a question for  
20 consideration, what Mr. Fisher brought up. Sooner or later we  
21 have to decide, is the green pavement exclusive bike or shared  
22 lane, because that's going to create confusion.

23 CHAIR ROBINSON: I agree with that.

24 COMMITTEE MEMBER OLENBERGER: Can I just say, I think  
25 though, when a bike lane, though, is clearly marked bike lane,

1 I think it has to go in conjunction with the labeling. Because  
2 on -- on this one it actually has a sharrow. So it's letting  
3 the cars know it's okay to share, you know? If there's not a  
4 cyclist, you're okay to use this. If there's a cyclists, give  
5 the cyclist the right of the road. But in the bike lane it has  
6 a white stripe, a solid white stripe with the bike lane  
7 labeled. So I think green, again, denotes presence of cyclist.  
8 But then it further goes on to define the level of it.

9 COMMITTEE MEMBER BAHADORI: Yeah, that's true. But  
10 the driver is going to see the color before the symbols, and  
11 the symbols are sporadic in distance. So if you are sending  
12 the message that these are shared, you don't want to go and pay  
13 an exclusive bike lane green because then drivers are going to  
14 assume that's a shared lane also.

15 COMMITTEE MEMBER OLENBERGER: I know there are cities  
16 that are actually painting bike lanes, like actual --

17 COMMITTEE MEMBER BAHADORI: Yeah.

18 COMMITTEE MEMBER JONES: Yeah, they are.

19 COMMITTEE MEMBER BAHADORI: Yeah.

20 CHAIR ROBINSON: Bryan, you had a comment?

21 COMMITTEE MEMBER JONES: I like that green is just  
22 associated with bicycles and the presence of bicycles, and not  
23 that it has to be in a Class 2 bicycle facility, but that the  
24 stencilling on the green will denote how a car can street it.  
25 And the -- the location on the roadway is very different. One

1 is on the edge with a white stripe, and the other one is in the  
2 middle of a travel lane. So I think -- I think it is pretty  
3 evident to a motorist what to do. And it's more in the  
4 presence of a bicyclist. And if we can start changing the  
5 culture of how we accommodate and encourage most modes, then  
6 maybe Oakland won't be experiencing the travel -- the travel  
7 demand forecast in 30 years that they're projected with the  
8 high densities in their downtown area.

9 But I'm very encouraged that you guys are trying to  
10 connect with the bridge and with the BART station in that last  
11 mile connection. That is very great that you're connecting all  
12 those corridors.

13 CHAIR ROBINSON: Okay. We'll -- we'll take a ten  
14 minute break. And when we come back we'll start our next  
15 request for experimentation.

16 (Off the Record From 11:40 a.m., Until 11:52)

17 CHAIR ROBINSON: Let's come back to the session  
18 please. Next one, item six, we have our second request for  
19 experimentation, 13-02. It's a request to experiment with bike  
20 boxes and wide bike lane -- bike strip stripe, proposed by the  
21 City of Davis.

22 Jeff, do you have any comments?

23 COMMITTEE MEMBER KNOWLES: Not other than to  
24 introduce the speaker and welcome him here.

25 CHAIR ROBINSON: And understand, this is also FHWA

1 approved?

2 SECRETARY SINGH: Not yet.

3 MR. KEMP: Not yet.

4 CHAIR ROBINSON: Not yet?

5 MR. KEMP: It's in process. It's been mailed to  
6 them.

7 Well, thank you very much, Committee Members. My  
8 name is DK. I go by DK, my initials. I'm the active  
9 transportation coordinator for the city. I've been there for  
10 over a year now. And, you know, as you know, Davis has -- has  
11 long been an experimenter/innovator of facilities. And, well,  
12 it's been a couple decades, but we're back. There's a new  
13 renaissance happening right now in Davis to really upgrade  
14 facilities that are currently existing there and to make them  
15 more conducive for really people of all ages and abilities,  
16 addressing some of the fears associated with cycling, traffic  
17 scenarios and whatnot.

18 So this project here, the Fifth Street Corridor, is  
19 really the last arterial in Davis to not have any bicycle or  
20 pedestrian amenities. So let me get going here with this.

21 You can see, it's located -- I don't know if we want  
22 to dim the lights here, if that would help. So this, yes,  
23 again, Russell Boulevard, which is also Fifth Street, is the  
24 main arterial that goes through town and connects with the  
25 cities of Winters to the west, and then sort of dies out here

1 as we approach East Davis here. It's also, being the middle of  
2 our downtown area, it connects or it's a major road to cross in  
3 terms of hitting what is the Old North Davis and Old East  
4 Davis, into the downtown area. So there's a lot of bicycle and  
5 pedestrian obstructions of trying to get across this four-lane  
6 arterial, which we'll be taking down to a two-lane arterial and  
7 adding bicycle facilities, bike lanes and crosswalks.

8           This is just a quick shot of the street that we're  
9 working with right now. You know, Davis has a -- I think it's  
10 now a 22.1 percent mode share, 40 times the national average of  
11 cyclists. And it's been that way, having a large proportion of  
12 cyclists, for a long time, since the '60s, late '60s when we  
13 invented the first bike lane. And the university, UC Davis,  
14 really kick-started that way of life in town. And, of course,  
15 the separated trails all throughout the city really help with  
16 that. And so there's a lot of folks out -- out there biking.

17           So the Fifth Street Corridor Improvements Project,  
18 this is just a quick few of the overall project. It's one of  
19 the original visions of the project to come up with a number of  
20 enhancements that really make it more conducive for cycling  
21 along this arterial street, using the green markings for the  
22 conflict zones, and, of course, the bike boxes, which we'll get  
23 to in a second.

24           Here's another shot of the corridor here where we've  
25 taken the four lanes down to two lanes; the road diet, if you

1 will. And a couple other neighborhood amenities to really  
2 bridge the gap between North Davis, East Davis, and the  
3 downtown area.

4           Let me start with the -- the first item for  
5 experiment here, and that is the one-foot edge stripe, the bike  
6 lane edge stripe. Now, a part of the original vision we had  
7 for this project, we wanted to put in buffered bike lanes to  
8 really make it more comfortable for all ages and abilities so  
9 they didn't feel the pressure of traffic. And as you know,  
10 this is -- may not know, this is one of our most heavily used  
11 streets. We'll be bringing the traffic speeds down quite a bit  
12 with the new striping plan. But again, we want to provide  
13 cyclists with a little more comfort.

14           So what we've done here is we've had to modify what  
15 would have been our buffered bike lanes in order to install  
16 some pedestrian amenities, which include some pedestrian  
17 refuges. So we were working with a very narrow street. And  
18 the one-foot stripe came to us as option to provide somewhat of  
19 a buffer, yet greater than a typical six-inch stripe. That's  
20 the first thing we're experimenting with. This would go from  
21 Streets A through L.

22           The second items on the request to experiment are the  
23 installation of bike boxes. Now, here we just have one that  
24 we're experimenting with. And thanks to the -- the work of the  
25 CBAC we were able to eliminate one of the bike boxes we were

1 proposing originally. An instead, if you look north there on A  
2 Street, we put in the bike lane that goes between the left turn  
3 and the right turn lanes. And you can see there's also a  
4 trail, a bike trail that connects here too.

5           This here is the university. So right here at this  
6 intersection and right here, at every -- at just about every  
7 signal light -- I'm sorry, every phase you will have 5 to 10 to  
8 15 cyclists that are backed up in this area right in here. And  
9 what we were seeing here, and this is the nature of the  
10 problem, is that there was a lot of competition with right-  
11 turning vehicles and forward-moving cyclists. And cyclists  
12 were often, you know, put back way over here, and the cars are  
13 waiting for a long time to make those rights.

14           The crash statistics on this, the crashes are not  
15 heavy. It's more anecdotal, and there's a lot of close calls.  
16 And my office is actually right here. So we're out here  
17 observing this quite a bit.

18           This is the second location for the bike boxes. This  
19 is on E Street. The first one was on A. So now the university  
20 is, again, further to the southeast -- southwest, excuse me.  
21 And this is also a major corridor that connects with the  
22 university down by Third Street, one of the -- another bicycle  
23 corridor. And if you go north on B Street you actually come  
24 into the public library. There's three schools up there; Davis  
25 High School. There is North Davis Elementary. It connects to



1 a number of public institutions and whatnot. So this corridor  
2 right here, which also connects to the downtown, is also  
3 heavily used by bicycles.

4 Now, we proposed the -- the bike box here in order to  
5 make that left turn on what -- where we will -- when we do have  
6 the bike lanes here. Again, right now we don't have any bike  
7 lanes on this road. So we're assuming that the traffic along  
8 this road for cycling is going to be more heavily used. And  
9 then the same with the southbound lane here.

10 We can get into some of the evaluation aspects. I  
11 know it was a very brief presentation. I kind of wish I went  
12 first. But there's a number of things here with the evaluation  
13 of the experiment that I wanted to touch upon here.

14 Let me talk first about the bike boxes. Some of the  
15 things we want to look at is the proportion of motor vehicles  
16 encroaching into the bike box. The vehicle compliance with the  
17 right-on-red prohibition. Appropriate cyclist position for  
18 left-turn movements from southbound A Street to Russell  
19 Boulevard, and from northbound onto Fifth Street. The  
20 effectiveness of cyclists being able to travel through the  
21 intersection in a timely manner. Again, the principle here is  
22 to get those cyclists up in front of the intersection, make  
23 them visible, and get them across first in order to free up the  
24 cars that want to make a right turn. And by far, bicycles make  
25 up the larger number of vehicles at the A Street and Russell

1 Boulevard intersection.

2           We're also going to, with the bike boxes, observe the  
3 potential impediments to motor vehicle traffic flow, crash and  
4 vehicle speeds analysis and, of course, bicycle counts.

5           With the 12-inch stripe, the one-foot bike lane  
6 stripe, really what we're going to examine here is the shy  
7 distance between the cyclists and passing vehicles. We're also  
8 going to look at the type of cyclists that are using this  
9 compared to other roads in town where we don't have a buffered  
10 bike lane but there is a large -- high volume of traffic.

11           There's also the appropriate vehicle positioning  
12 during right-turn movements on and off onto Fifth Street and  
13 encroaching into that space. And then cyclists position to the  
14 intersection, crash and speed data and, again, traffic counts.

15           Thank you. I'm happy to answer any questions you  
16 have about this experiment.

17           CHAIR ROBINSON: Thank you.

18           MR. KEMP: Thank you.

19           CHAIR ROBINSON: I'll start with the committee.  
20 Rick?

21           COMMITTEE MEMBER MARSHALL: I have a question. Can  
22 you go to the slide of B Street?

23           MR. KEMP: Sure.

24           COMMITTEE MEMBER MARSHALL: So as I understand,  
25 bicycles will be coming from either north or south and are able

1 to go -- I think I'm okay without it, thank you -- in either  
2 direction they can go left, right or through; is that correct?

3 MR. KEMP: Correct.

4 COMMITTEE MEMBER MARSHALL: And so that's why the box  
5 spans all the way across as far as it does. Is there any need  
6 or desire to indicate within the box left-turning bicyclists  
7 should be here and through-bicyclists here and right-turning  
8 there, or do you anticipate that? What do you think about  
9 that?

10 MR. KEMP: We talked a little bit about that. And to  
11 have directional arrows with the bicycle, showing which way you  
12 want to go, straight. That could potentially improve the  
13 directional or the way of defining for the cyclists in order to  
14 go. It's an option that we would consider.

15 COMMITTEE MEMBER MARSHALL: That was my only question  
16 so far.

17 CHAIR ROBINSON: Okay. Anyone else? Okay. Please  
18 come up.

19 MR. BAROSS: Again, I'm Jim Baross, this time Vice  
20 Chair of the California Bicycle Advisory Committee. We did  
21 review this. We're recommending that it go forward for  
22 experimentation, subject to whatever conditions you want to put  
23 on it. However, we had several strong concerns and comments.

24 I think from my perspective the recommendation to go  
25 forward with experiment is based a lot of significant interest

1 from bicyclists and others trying to find ways to make these  
2 kind of intersections more accommodating, especially in Davis  
3 where there's such a high number of uses.

4           There was written comments provided from CBAC which  
5 didn't make it into the agenda but have been submitted to the  
6 members, I think. And I'm going to read from them and ask if  
7 it's appropriate that they -- the document itself be put in the  
8 notes. So I'm going to have to read every single word.  
9 Hopefully you can refer to it.

10           First, our concern on A Street, I think it was, about  
11 the bike boxes was removed. And we appreciate the -- we  
12 appreciate the responsiveness to our concerns right there.

13           But the operational characteristics of a bike box on  
14 northbound A Street and bike boxes in general bring some  
15 potential confusions about the movements that are expected of  
16 bicyclists and motorists, especially where motorists are making  
17 a right turn, as to when they would enter the space or not to  
18 move over to make the right turn, or whether they'd feel  
19 precluded by entering to the right-hand side of the bike box or  
20 the lane right; I'm not sure what you call it. So I hope  
21 you'll -- you'll look at those notes.

22           We're hoping and proposing, I think that the actual  
23 striping of the bike lane itself, different from the coloring,  
24 would adhere to the standard bike lane striping. In other  
25 words, it would be solid up to approximately 200 feet from the

1 intersection or whatever is allowed, and then either be dashed  
2 or dropped. We are concerned that if it's solid all the way  
3 up, bicyclists who want to move to the left or go straight  
4 might be precluded from doing that.

5           So I think that covers -- oh, one other note.  
6 There's -- I don't think DON'T KNOW mentioned, there's still a  
7 proposal for the 12-inch wide bike lane?

8           MR. KEMP: Yes.

9           MR. BAROSS: Yeah. We didn't have any special  
10 difficulty of the idea of expanding the bike lane in one  
11 section to 12 inches wide, rather than the standard. Although  
12 we were concerned that if it goes dashed at 12 inches it's  
13 going to look like the elephant tracks which you see along the  
14 freeways. Are you familiar? And we are concerned that while  
15 the wider stripe might not be confusing, the wider dashing  
16 might be confusing.

17           Also, not part of the package that was provided to  
18 you was another request of the CBAC to the City of Davis when  
19 they implement this is that we thought it would be helpful to  
20 develop and provide some printed or otherwise public  
21 information material about the expected movements that would be  
22 appropriate for bicyclists and or motorists. I know noticed UC  
23 Davis has a packet of information they provide to their new  
24 bicycle-riding students. And it provides information about how  
25 to deal with traffic, because many of the students don't know

1 how to do that. And we'd encourage development of simple but  
2 appropriate direction so that everybody knows what to do.  
3 Because, quite frankly, at the CBAC meeting many of us were  
4 confused about what we would do at that intersection.

5           So in summary, we think it's worth trying these  
6 things out under controlled situations. And we fully believe  
7 that DK and his staff will do that carefully.

8           MR. FISHER: Good morning again. John Fisher. Three  
9 points. I believe there already is a standard for how to  
10 stripe a buffer. I think the FHWA has put in writing that  
11 there is already a standard. It's a standard you use anywhere.  
12 It's two wide white lines separated by a space, the same  
13 treatment you use to identify a core area where you have the  
14 option of putting in chevrons if you wish.

15           Also in California a year ago there was approval for  
16 the double white line, which is a form of a buffer which means  
17 don't cross, but it doesn't provide physical space. So you  
18 could put a double white line. You could put two wide white  
19 lines. You could put chevrons between them. I believe there  
20 is a standard for a buffer.

21           Point number two, as indicated there on the lower leg  
22 of the intersection, that area would be colored in green. And  
23 I think -- my point again is the mixed message we're sending.  
24 That's intended to be the exclusive area for bicyclists. Yes,  
25 motorists can pass over it after they get the green, but they

1 can't travel through it. It's exclusive use for the  
2 bicyclists. That's the intent there. So we are continuing to  
3 send a mixed message.

4           My third point is I'm torn on the idea of a bike box.  
5 On the one hand I think what a great amenity. It gets the  
6 bicyclists in a position where they can easily enter the left-  
7 most lane to make their left turn. Now, the Vehicle Code says  
8 that to -- for bicyclists to make a left turn they must enter  
9 the left turn lane. And normally they start to do that 300  
10 feet upstream of the intersection. And they have to weave  
11 across lanes of traffic to do so. This provides an easier way  
12 to do it. But it only works if a bicyclist arrives on the red,  
13 so that traffic is stopped so that a bicyclist can safely edge  
14 over and enter the left-turn lane.

15           What happens if a bicyclist approaches on a red  
16 thinking it's going to be red when he gets to the intersection  
17 or she gets to the intersection and suddenly it goes green?  
18 The bicyclist has lost his or her opportunity to enter in the  
19 normal fashion the left-turn lane, and will sit there and wait  
20 for gaps in traffic and quickly scoot over there to try to make  
21 it into the left-turn lane. So it works well when you arrive  
22 on red. It doesn't seem to work well if you arrive on green or  
23 if you're approaching on green. You have to make a decision  
24 200 to 300 feet back what you're going to do.

25           So I just think we need to keep that in mind as you

1 consider bike boxes and the many other innovative ideas that  
2 are coming our way, it doesn't work in all cases.

3 MR. MILLER: Rock Miller, alternate to the committee.  
4 I just wanted to indicate, I'm sure a lot of you know, the bike  
5 box is one of the more controversial items that the bike world  
6 is dealing with. There are people who are very enthusiastic  
7 about bicycling that finds themselves on different sides of  
8 that issue.

9 I've had some good experience with some bike boxes  
10 that I've designed and some that I've seen. I've seen others  
11 that don't work as well. I'm very enthusiastic of us testing  
12 bike boxes under as many a variety of conditions as we can  
13 find. And I'm particularly excited to see a test going on in  
14 Davis where I know we'll have five to ten bicycles each time  
15 the traffic signal changes. We'll be able to develop very good  
16 data on what happens when there's a lot of bicycles there.

17 I think we'll also get very good data on what happens  
18 when it's done in a community where the motorists are really  
19 used to seeing bicyclists, look -- look for them well and have  
20 a minimum of problems that are related to not expecting a  
21 bicyclists.

22 I would encourage the committee to proceed to allow  
23 this test to occur. There were at last count, I believe, some  
24 15 or 16 bike box experiments underway across the country.  
25 FHWA is assembling a lot of data on them. I think they'll be



1 able to give us some information on where they work and where  
2 they don't work. And I think the best thing we can do is  
3 provide additional opportunities to contribute to that data set  
4 so that in the end we will know where they work and where they  
5 work best. Thank you.

6 MR. MORRISSEY: Hi. Sam Morrissey, City of Santa  
7 Monica. We were here in December talking about buffered bike  
8 lanes. And at that time we took a look again at the FHWA  
9 guidance on buffered bike lines from their website. And FHWA  
10 says that,

11 "Buffered bike lanes can be implemented at  
12 present time if pavement markings and crash-worthy  
13 channelizing devices for bicycles that are compliant  
14 with the MUTCD are used."

15 I think this is a good experiment to use a 12-inch  
16 line because it gets rid of the crash-worthy channelizing  
17 devices that FHWA currently requires. So I'd support this 12-  
18 inch stripe request. I think it's a good experiment. Thank  
19 you.

20 CHAIR ROBINSON: Anyone else?

21 Bringing it back to the committee.

22 COMMITTEE MEMBER JONES: From an application  
23 standpoint, a 12-inch wide stripe is fairly easy to put down,  
24 or a lot easier to put down rather than having chevrons between  
25 lines. And I think it gives another option for jurisdictions

1 to consider. I think where we're trying to retrofit a lot of  
2 roadways, the more options we have to provide space or  
3 separation is -- is better because not -- not all roadways have  
4 been designed equally or in the same decades and, therefore, we  
5 have different issues that we're trying to address on different  
6 types of roadways, whether it's a speed volume with the roadway  
7 or what's available. And, again, you might not have two or  
8 three or four feet available to put two white lines separated  
9 by stuff. So I think a 12-inch stripe would be something that  
10 would be very good for us to experiment with.

11 And as an alma mater of UC Davis, I would like to  
12 make the motion to support this.

13 SECRETARY SINGH: Subject to the FHWA.

14 CHAIR ROBINSON: Yeah.

15 COMMITTEE MEMBER JONES: Subject to the FHWA. Thank  
16 you.

17 CHAIR ROBINSON: Rick?

18 COMMITTEE MEMBER MARSHALL: Yes, I appreciate the  
19 reminder that we had a similar item on our meeting last -- our  
20 agenda last meeting. We approved the experiment in Santa  
21 Monica, in fact, for bike boxes. And I glanced back at my  
22 notes from that meeting, and another thing that Santa Monica  
23 requested I think was actually separate from the bike box  
24 location, but it -- it occurs to me that it may be an option  
25 that Davis could try if they find a need for it, was the

1 sharrows indicating particular turning movements. You know,  
2 the bike route goes this way.

3 But I was thinking, if Davis observes that they need  
4 guidance in the bike box for who goes where, maybe the turning  
5 sharrows concept could be added in that green area of the box  
6 as part of the experiment. I'd just like to offer that for  
7 consideration.

8 COMMITTEE MEMBER BAHADORI: Mr. Chairman, you have a  
9 motion now.

10 CHAIR ROBINSON: We have a motion.

11 COMMITTEE MEMBER BAHADORI: We have a motion. See if  
12 you have a second.

13 CHAIR ROBINSON: There is not a second yet.

14 COMMITTEE MEMBER BENTON: I'd like to second the  
15 motion.

16 CHAIR ROBINSON: Thank you. So we've got a motion  
17 and a second by Janice. Any other comments? Jeff?

18 COMMITTEE MEMBER KNOWLES: I'm always anxious for  
19 hard data with these various experiments. And it wasn't clear  
20 to me, I mean, with Oakland, you know, they were going to do  
21 two (inaudible), they were going to have ten video cameras,  
22 they're going to monitor the corridor, but it wasn't clear when  
23 you're talking about, you know, the proportion of vehicles  
24 encroaching in the bike box, you know, is that existing versus  
25 what project? Are they also looking at how many are already

1 encroaching in the crosswalk, you know, as motorists often do?  
2 Is it just simply a relative distance? You're measuring it  
3 from the prolongation so we can see if we at least increase the  
4 amount of space available for cyclists?

5 I didn't see in the experiment the addition of right-  
6 turn-on-red prohibitions, but they were going to measure  
7 vehicle compliance. So I didn't know whether that was before  
8 or after what.

9 When you talk about appropriate cyclist position for  
10 left-turn movements, I wish we could really -- you know, what  
11 does that mean? You know, exactly what do you mean by  
12 appropriate versus inappropriate? You know, the effectiveness  
13 of bicyclists able to get through the intersection, I don't  
14 know exactly what that means or how it's measured to observe  
15 potential impediments to traffic flow. I mean, I don't feel  
16 like I'm going to get hard data out of at least this  
17 description of the study procedure, you know, before and after,  
18 the shy distance between cyclists, how is that going to be  
19 measured, you know?

20 So for me, I'm concerned that I don't -- you know, as  
21 we talked about yesterday, how do you measure success of the  
22 project? I'm used to cyclists or pedestrian getting their bike  
23 box. But as it talked about the Portland collision experience,  
24 I want to make sure the hard data that supports possibly the  
25 outcome of the experiment is very clear in case there's also a

1 negative side, and you can have hard data really to balance the  
2 pros and cons of the outcome of the experiment or whether it's  
3 applicable in other agencies. And I would normally, in these  
4 kinds of studies, want more definition in the before and after  
5 collection of data so I understood what we were going to end up  
6 with after this experiment was over.

7 CHAIR ROBINSON: I tend to agree with that, Jeff. Do  
8 you have any thoughts on how we might shore that up? The shy  
9 distance, what are you going to do? Are you going not ask  
10 people how they felt driving, you know, riding through?

11 MR. KEMP: Well, there was a lot that was just  
12 mentioned here. And I agree with you. And, you know, really  
13 coming up with studies that peel out that -- extrapolate that  
14 hard data is going to be part of this. We didn't get into  
15 detail on this. But, you know, looking at peak times and  
16 measuring vehicle counts and really observing it during those  
17 times, to come back with, you know, how many vehicles are, you  
18 know, obeying the No Right Turn On Red? And we did include  
19 that in the evaluation, the proportion of motor vehicles  
20 encroaching into the bike box which was on page 38.

21 And, yeah, some of it will -- also will be anecdotal.  
22 Apart from speaking with people who use it, how does it feel  
23 compared to another facility where we don't have those same  
24 facilities? So it's going to be a combination of both  
25 qualitative and quantitative data.

1 COMMITTEE MEMBER KNOWLES: So would you be open  
2 through this process? Because whether it's the one-foot wide  
3 strip as a buffer or, again, another experiment with bike boxes  
4 and a number of other things, to review by the committee of  
5 your initial findings and feedback from the committee for  
6 additional study in case we want the data to be, you know,  
7 analyzed a slightly different way or a different set of data  
8 collected. Because it seems like they're setting up a pretty  
9 good experiment here, but you might not get everything you need  
10 from the first delivery of study data and you might want to  
11 have them --

12 MR. KEMP: We could.

13 COMMITTEE MEMBER KNOWLES: -- yeah, collect more data  
14 on this.

15 MR. KEMP: Absolutely. We're very open to that.

16 CHAIR ROBINSON: Hamid?

17 COMMITTEE MEMBER BAHADORI: Following Mr. Knowles  
18 concern, on some of these I have noticed that in similar type  
19 of experimentation requests that have come before us, I really  
20 don't know if we are every going to find out. I mean, is 12  
21 inches wide enough? Do you want to compare it with 11 inches  
22 or 10 inches? Which one is more effective under what  
23 condition? I really don't think we will ever know how  
24 effective these kinds of treatments are.

25 First of all, the size of the data is going to be so

1 limited, so small because you are looking at only a couple of  
2 locations. And like in this specific case, you are introducing  
3 it to a community where there is already a very high level of  
4 awareness among the drivers of the presence of the bicyclists.  
5 And the interaction is much better than say places like L.A. or  
6 San Diego or other larger areas.

7           So I share the concern that Mr. Knowles has. I think  
8 that was the concern, that if we are ever going to find out how  
9 effective these things are, I mean, it's just we do it and  
10 experiment it, and I support the innovation. But I really  
11 don't -- I'm not holding my breath to really find out whether  
12 12 inches -- why the new standard? Is it good? Why not ten  
13 inches?

14           MR. KEMP: If I may speak to that --

15           COMMITTEE MEMBER BAHADORI: I don't know.

16           MR. KEMP: -- for a second.

17           COMMITTEE MEMBER BAHADORI: Sure.

18           MR. KEMP: Okay. That's a really good question.  
19 And, you know, what we have to work with here is, you know,  
20 looking at the standard six-inch wide bike lane stripe, the  
21 proposed one-foot, and then also looking at what a two-foot  
22 buffer is, and comparing the usage along these different  
23 streets, and the type of users as well. I mean, that's going  
24 to be a big part here. You know, we'll see a lot of  
25 traditional commuter cyclists who are comfortable riding with

1 high traffic volume and speeds. But we wont get another  
2 proportion of the population that we want on bikes.

3           So we're looking for gender equity. We're looking  
4 for a balance of both male and female to ride bikes. And  
5 currently in America it's two, sometimes three-to-one. In  
6 Davis we're a little bit higher than -- than just the two-to-  
7 one. But we want to bring up the other -- we want to make a  
8 balanced load share among genders. So this is one way for us  
9 to experiment in how well do these facilities work to create a  
10 more comfortable environment to get more people on bikes.

11           So looking at the number of cyclists, you would use  
12 this over another facility, is one way to determine that, I  
13 believe.

14           COMMITTEE MEMBER KNOWLES: All right. So -- and what  
15 I was looking for was a way of instead of getting into what  
16 looks like maybe fairly vague measurement criteria, since  
17 you're agreeing to remove this if the committee decides there's  
18 safety concerns with regards to your experiment, you know, as  
19 part of that process before you'd make that determination or  
20 terminate the experiment I think that in a community like this  
21 they'd be willing to collect additional data if you wanted it.  
22 So we would -- we'd first have to see what their interpretation  
23 of these terms are in terms of their after study. But it  
24 sounds like they're open to additional study if you want to  
25 glean additional data from the experiment.



1 CHAIR ROBINSON: Jeff, I heard something from John  
2 earlier that kind of struck a little bit of a nerve, and I  
3 think maybe this is an opportunity to learn from it. And John  
4 mentioned what -- for the left-turners, how -- you know, it's  
5 fine when you get there on the red, but happens when you get  
6 there on the -- on the green? Yeah.

7 So maybe we can have you take a look at how do  
8 bicyclists who are approaching on the red but the light turns  
9 green, how do they get -- you know, how do they make their left  
10 turn?

11 MR. KEMP: How do they make that transition into the  
12 box?

13 CHAIR ROBINSON: Yeah. That --

14 MR. KEMP: Right.

15 CHAIR ROBINSON: That sure would be a dilemma if you  
16 were already committed and you're --

17 MR. KEMP: Are they using vehicular cycling --

18 CHAIR ROBINSON: -- you know, 50 feet away and you've  
19 got -- so I think that's some good data --

20 MR. KEMP: Okay.

21 CHAIR ROBINSON: -- that you could collect --

22 MR. KEMP: Very good.

23 CHAIR ROBINSON: -- that would -- would be  
24 meaningful.

25 MR. KEMP: Absolutely.

1 CHAIR ROBINSON: Okay.

2 MR. KEMP: The educational aspect that Jim had, Mr.  
3 Baross had referred to, is also part of our strategy here, and  
4 with the university being right close to the two experiments  
5 and throughout the community. It's relatively a small  
6 community, as you know.

7 Portland had a similar type of education campaign  
8 called Get Behind the Box, Behind the Box, and it worked really  
9 well at teaching people how to use this. And that is also part  
10 of our strategy. I didn't put that in. Thank you.

11 MR. MILLER: I can't predict what -- this is Rock  
12 Miller again. I can't predict what the FHWA letter from them  
13 will say. But I know that the FHWA letter I received to do  
14 bike boxes a few years ago asked for hundreds of hours of  
15 videotape of the behavior of bicycles approaching the devices.  
16 We heard from San Francisco -- from Oakland an hour ago, that  
17 they're proposing hundreds of hours of video, probably because  
18 FHWA has asked for it.

19 I know the desire to get data. I also know that when  
20 you do some of these things for the first time you really don't  
21 know what to count. Because until you install it you don't  
22 know what strange things are going to happen. When I know it's  
23 going to be measuring the conditions after it's on the ground I  
24 say, well, okay, at least we can go back and get more data if  
25 we ever need to. The before data is the stuff you can't get

1 back and get because you can't tear it out to count what it was  
2 like before and get the usage levels back to what it was  
3 before.

4           And from my personal perspective the goal of these  
5 experiments are twofold. Number one, to increase the number of  
6 people that bicycle. And number two, to improve the safety for  
7 everybody on the streets. If those factors are trending in the  
8 right direction I think a lot of the other things are  
9 interesting math experiments and interesting psychology  
10 experiments. But I hear criticism, you know, Long Beach  
11 doesn't know how many cars are in the left lane versus the  
12 right lane right now. Frankly, it doesn't matter how many are  
13 in the left lane versus the right lane, and what would you do  
14 if you knew the answer?

15           I think it's wise to watch these experiments. And I  
16 really, in the case of bike boxes, think it's going to end up a  
17 federally funded or a pooled fund research study done by some  
18 prominent university somewhere in the country that's going to  
19 look at the thousands of hours of videotape, supplement that  
20 with research taken under controlled laboratory conditions by  
21 people that are really qualified to research and in the end  
22 produce a documentation that stands up to the tests of the  
23 research in the academic community.

24           One of the problems I know with the research that the  
25 project proponents do is we so want our projects to succeed

1 that we will often produce it in the best light possible. And  
2 I think it actually would be better for the research to be done  
3 by people that are a little bit less concerned about the  
4 results than the project proponent. Thank you.

5 CHAIR ROBINSON: Okay. Okay. We've got a motion and  
6 a second to approve the -- the experimentation. And I think if  
7 there aren't any more comments, we'll go ahead and put this to  
8 a vote. All in favor of approving, raise your hand. Opposed?  
9 I believe it's unanimous. We got one opposition. We got one  
10 opposition. So it's eight to one.

11 SECRETARY SINGH: Who was opposed?

12 CHAIR ROBINSON: Mark.

13 SECRETARY SINGH: Mark?

14 CHAIR ROBINSON: Mark.

15 SECRETARY SINGH: Okay.

16 CHAIR ROBINSON: We're going to move on to discussion  
17 items. Item number 13-03, Bay Area 511 sign proposal.

18 Janice?

19 COMMITTEE MEMBER BENTON: I'll -- I'll revert --  
20 refer to the -- the speaker.

21 MR. LEONG: Thank you, Mr. Chairman, Committee  
22 Members. My name is Sze-Lei Leong from the Metropolitan  
23 Transportation Commission. I'm here to present an item as an  
24 informational item only, with the intention of coming back to  
25 the next meeting to request approval for a sign. I don't have

1 a presentation. But the sign that I'm referring to is SP 49A  
2 (phonetic), the 511 Travel Info Call 511 sign. And our  
3 intention is to request either modification of some change to  
4 the sign that would include the change to the logo. It would  
5 be the local 511 sign. And a change to the content itself to  
6 something along the lines of Freeway Aid or Motorist Aid. But  
7 I'll give a little more background about our project.

8           Again, I'm the call box program coordinator for the  
9 Nye County/Bay Area up north. Call boxes, a bit of background.  
10 We manage and operate just about over 2,000 call boxes within  
11 the Bay Area. And to no surprise, the call volumes have  
12 decreased since -- with the increase of cell phone usage. So  
13 our challenge is to -- to address the dropped calls and to  
14 still provide an important service to the motoring public to  
15 make sure that there is an alternate way to call for emergency  
16 services.

17           So what we've done since 2008 is to start what we  
18 call a mobile call box program, which essentially is -- and  
19 what we call it in the Bay Area is 511 Freeway Aid. I believe  
20 L.A. calls it #399 or Use #399. But since 2008 we've provided  
21 a mobile call box service which motorists can use their cell  
22 phone to call 511, and it is basically the same service that a  
23 motorist would use as if they would call the call box, which  
24 includes calling for tow services, either freeway service  
25 patrol if it's available, or rotational tow, or Caltrans tow,

1 or their own private automobile services.

2           So while call volumes have dropped from 98,000 in  
3 2001, which was a peak, to about 20,000 calls a year, we've,  
4 since 2008, started 511 Freeway Aid where our calls have  
5 increased from 511 Freeway Aid to just about actually 28,000  
6 calls a year for 511 Freeway Aid. But we're not at the point  
7 where -- where we felt that 511 Freeway Aid, that message is  
8 out to the public enough. So just about 40 percent of Bay Area  
9 commuters are aware of 511 or freeway service patrol, etcetera.  
10 So we're sure that's not enough. We need to get the message  
11 out there. We really need to push our message for using 511.

12           And by the way, 511 has many facets. It provides  
13 travel info, as you know. But we are using it to provide  
14 transit information. But also, why I'm here is to promote  
15 the -- the use for calling the services that are used to the  
16 call box, as well.

17           So our plan for 2013, what we're doing is we're  
18 moving just about 430 call boxes in the -- in the Bay Area,  
19 particularly in the urban areas. We're not touching the  
20 tunnel, tube and bridge call boxes, and rural call boxes. But  
21 these 430 call boxes will be removed within the urban areas.  
22 And what we will see is every other call box being removed. So  
23 spacing-wise we envision every other mile, call boxes.

24           So where the call boxes are removed what our plan is,  
25 to maintain the -- the standard 14-foot pole and install a 511

1 sign that will have a message. And this is not in your packet.  
2 But what we are experimenting with -- with focus groups and  
3 servers up north is a message -- and please disregard the  
4 spacing -- something along the lines where we have Freeway Aid  
5 or Motorist Help or Roadside Assistance. We're not sure of the  
6 message yet as we're conducting that. But, again, what we use  
7 in the Bay Area is Freeway Aid. This hopefully will get the  
8 message across that, especially with stranded motorists out  
9 there, that if they're stranded out there, there is an  
10 alternate way to call for services while those call boxes are  
11 being removed.

12           This is especially important when in 2016 or 2017,  
13 where we will be removing just about all call boxes in the  
14 urban areas. But we intend to still have those signs that we  
15 plan to install this year, 511 Freeway Aid or Motorist Aid. So  
16 while we have -- we intend to remove the 430 call boxes to be  
17 replaced by the 511 sign, Freeway Aid signs or Motorist Aid  
18 signs, we will eventually have removed at least 1,000 call  
19 boxes, and hence 1,000 signs later on. So essentially while we  
20 are installing the signs there will be less signs than call  
21 boxes in 2016 or 2017.

22           So as I mentioned, the message, we are conducting  
23 focus groups and surveys this year, this month and next month,  
24 with the intention of coming back next month to provide our  
25 results in terms of the message.

1           So I wanted to ask if -- well, what I wanted to ask  
2 is -- is the -- if you could provide guidance to us or any  
3 feedback that you may have. But my question is, also, with our  
4 request would -- how should we approach it for our presentation  
5 next time if it's going to be a modification to the California  
6 MUTCD for this sign, or if we would require an experimental  
7 process of this -- for the -- for these signs?

8           SECRETARY SINGH: In my opinion this -- this is a  
9 modification.

10           COMMITTEE MEMBER BAHADORI: Mr. Chairman, a question  
11 for you. On the -- on -- I'll go with the second one, and then  
12 I'll come back to 511.

13           On the Freeway Aid we already went through a lengthy  
14 discussion when Metro, Los Angeles MTA, was requesting the  
15 signs back maybe four or five years ago for their 411. And  
16 they have -- or is it --

17           SECRETARY SINGH: #399.

18           COMMITTEE MEMBER BAHADORI: Yeah. Yeah. There was  
19 another one that they -- and there was already -- there's  
20 already an approved sign. So we can just take that one,  
21 because the committee already went through that discussion. I  
22 don't know if they solved it or not.

23           On the 511, the 511 is -- the sign is already in  
24 place in places like San Diego, which has had this. L.A. has  
25 had it. Yeah, so -- so why -- I'm -- I'm confused why we need



1 to either --

2 SECRETARY SINGH: We don't need experiment, in my  
3 opinion, of what we need for proposal, we need to amend this  
4 section to include the message, what we --

5 COMMITTEE MEMBER BAHADORI: Because both these signs  
6 are existing. They're already out there. I'm confused. Why  
7 do you want to even modify it first? If it's working fine in  
8 places like San Diego and L.A. --

9 CHAIR ROBINSON: You indicated that there were a  
10 number of --

11 COMMITTEE MEMBER BAHADORI: -- why would the Bay Area  
12 want a different sign?

13 CHAIR ROBINSON: There are a number of different  
14 messages that you -- that you showed us. Are you going to --

15 COMMITTEE MEMBER BENTON: Yeah. That's the  
16 difference.

17 MR. LEONG: It would be one -- one message.

18 CHAIR ROBINSON: It will be one message?

19 MR. LEONG: One message, yes.

20 CHAIR ROBINSON: And -- so that -- you'll be coming  
21 back to request approval with that one message?

22 MR. LEONG: Yes, pending our results from surveys.  
23 But also, I did not mention that the other region -- L.A.,  
24 Orange County are going -- possibly going to shadow us so that  
25 at least there's some consistency if we -- statewide if we

1 implement this, so at least the message is the same.

2 COMMITTEE MEMBER BAHADORI: Yeah. But what I'm  
3 saying is that these signs are already existing on the sides of  
4 the freeways and they're working fine. Why do you want to  
5 modify it?

6 MR. LEONG: Good point. It is -- 511 is a many-  
7 faceted service. The challenge that we face is that the -- the  
8 calling for the services, 511 Motorist Aid or Freeway Aid is  
9 not to the point where it is well known by the public,  
10 especially those who would need the emergency response on the  
11 freeway to call for services. So travel information is known  
12 for getting traffic information or, at least in the Bay Area,  
13 transit information. So that's the other facet.

14 COMMITTEE MEMBER BENTON: So I think the modification  
15 is the message of aid, not traveler information. They want to  
16 put on there a different message of what 511 means in the Bay  
17 Area.

18 SECRETARY SINGH: See, and I know the 511, someone  
19 called to find out the roadway information --

20 COMMITTEE MEMBER BENTON: Right.

21 SECRETARY SINGH: -- if it is working. But --

22 COMMITTEE MEMBER BAHADORI: So for the other one, we  
23 already went through that discussion and what that message  
24 should be for the L.A. Metro.

25 SECRETARY SINGH: But it's not it the California

1 MUTCD.

2 COMMITTEE MEMBER BAHADORI: Yeah.

3 SECRETARY SINGH: So we need to amend that section.

4 COMMITTEE MEMBER BAHADORI: Yeah. So if you just go  
5 and take that sign, because the committee discussed two  
6 meetings, and I remember they came into two meetings and we  
7 spent like two or three hours discussing the sign for the L.A.  
8 Metro. And I think the individual there is Ken Coleman if he's  
9 still there at L.A. Metro. And the committee made the  
10 recommendation and the Metro took the recommendation.

11 The reason I'm saying is just hopefully trying to  
12 save time.

13 COMMITTEE MEMBER BENTON: Yes.

14 COMMITTEE MEMBER BAHADORI: Because the committee  
15 already, about five years ago, spent two meetings discussing  
16 what the message should be on those signs.

17 CHAIR ROBINSON: So your instruction would be to  
18 contact Mr. Coleman --

19 COMMITTEE MEMBER BAHADORI: Yeah, I'll call.

20 CHAIR ROBINSON: -- and see how --

21 COMMITTEE MEMBER BAHADORI: Or Ken Coleman or  
22 somebody in L.A. Metro, whoever is Ken Coleman's replacement if  
23 he is still there. Don probably knows Ken.

24 MR. HOWE: Okay. I know Ken.

25 COMMITTEE MEMBER BAHADORI: Okay.

1           MR. HOWE: I'm Don Howe with Caltrans. I spent my  
2 first six years working as the coordinator for Caltrans side,  
3 working with the service authorities for freeways and  
4 expressways, or some -- some call themselves service  
5 authorities for freeway emergencies where they collect \$1.00  
6 per vehicle registration renewal annually and they provide  
7 motorist aid. Many of the urbanized areas, Los Angeles, Orange  
8 County, San Diego, the MTC, they fund a lot of freeway service  
9 patrol in conjunction with the placement of call boxes. And  
10 we've met preliminarily with -- with the MTC folks and talked  
11 about the message and so forth.

12           And so the concept is that they're taking down their  
13 existing call box at every other location. And what they want  
14 to promote is this further outreach that, you know, this thing  
15 in my pocket becomes my mobile call box. And if I dial 511 I  
16 can get the same call answering facility that answers the  
17 roadside call box calls. And that doesn't really come through  
18 with Travel Info, although it is implied.

19           My -- my experience, my six years in that position  
20 with the Bay Area is that there's quite an interesting freeway  
21 service patrol, I would call it a ballet. If you can  
22 coordinator orange freeway service patrol trucks operated by  
23 Caltrans and the white ones that are contracted out around the  
24 bridge approaches, and also the tunnels and tubes, Caldecott  
25 Tunnel, the opposing tubes and so forth that go to Alameda,

1 that given a certain time of the day orange trucks patrol the  
2 tunnels, tubes and bridges and the approaches to the bridge.  
3 But during the peak hours the white trucks show up and those  
4 orange trucks go right to the facility and they go back and  
5 forth.

6           So the beauty of having the 511 call answering people  
7 answering the phones or the cell calls is that they know where  
8 freeway service patrol is operating, at what hours of the day,  
9 and who would be in that area based on where they are. It's  
10 very interesting. So I see the proposal here is a good one and  
11 they're going to do some outreach and come up with something.

12           COMMITTEE MEMBER BAHADORI: I agree with what you are  
13 saying. Los Angeles County Metropolitan Transportation  
14 Authority, they already removed 2,000 call boxes. So they went  
15 through this process four or five years ago. They -- I think  
16 they had 4,000. They removed half of them. So they have  
17 already done this.

18           All that I'm saying is that this committee already  
19 went through that exercise when Mr. Fisher was our chairman in  
20 two meetings. Maybe we don't need to rehash it all over again.

21           CHAIR ROBINSON: Hamid, I think -- I think what --  
22 what they're looking to do is add to the existing sign  
23 potential for some additional words that would more -- more  
24 accurately describe what the service is. So I think the -- the  
25 section -- which would that be --

1 SECRETARY SINGH: It's under you --

2 CHAIR ROBINSON: -- Section 2I.10, Travel Info Call  
3 511 signs, they would be adding verbiage that would more  
4 specifically identify the service that's being offered.

5 COMMITTEE MEMBER BAHADORI: Perfect. I don't know  
6 if -- I think it was before we went to verbatim meeting  
7 minutes. But I strongly urge you to go and find those minutes  
8 and the reports that came to the committee about five or six  
9 years ago.

10 SECRETARY SINGH: Will do. Will do.

11 COMMITTEE MEMBER BENTON: Yeah.

12 SECRETARY SINGH: Yeah. So it's only discussion  
13 item. So we'll see if it --

14 CHAIR ROBINSON: And I think ultimately if -- if that  
15 leads you to conclude that you still need to make that change,  
16 then bring it back to the committee for the report, adding the  
17 additional words to the section.

18 SECRETARY SINGH: Thank you.

19 MR. BHULLAR: Okay. Going to number eight, item  
20 eight, information item 13-04, option of splitting the material  
21 in the MUTCD into two separate documents.

22 Johnny?

23 MR. BHULLAR: Johnny Bhullar with --

24 COMMITTEE MEMBER BAHADORI: I make a motion we split  
25 it into three documents. Two is not enough.

1           MR. BHULLAR:   Johnny Bhullar with Caltrans.  
2   Actually, this was just informational because I wanted to make  
3   the committee, as well as the public aware that we -- the  
4   direction that FHWA is taking on the MUTCD.   I'm not really  
5   looking at this time.   Of course, there was a public comment  
6   period that has come and gone.   But most of you might have been  
7   aware that we're going to submit the comments.   And so far  
8   there are about 177 comments.   And most of them or the majority  
9   of them are a no, or at least as a request for feds not to  
10   split the document.

11           We are not sure how and what direction the feds are  
12   going to take.   And, of course, I've already tried my luck with  
13   FHWA this morning, so I'm not going to go too far into details  
14   in explaining what the splitting of the manual is since I'm on  
15   the national committee, as well as the state duties.   Everyone  
16   has commented to that.   But what I want to bring to everyone's  
17   attention here is that once that does take effect we'll have  
18   two years, we are looking at about three years down the road  
19   when similar procedure will be undertaken for us if that's what  
20   happens.   And if that happens, of course, that would be, I  
21   would say, job security for our committee because we will be  
22   heavily dealing with.

23           And this is what I also added in my public comments  
24   was that California MUTCD has about 40 percent California  
25   contents, 60 percent federal.   So when they split it, whatever

1 effort they spend, we are looking at I would say two-third of  
2 that effort here in the state within two years. So three years  
3 down the road if we take action approximately is what we are  
4 looking at. There are a number of alternatives but it gets  
5 very complex. If you have the time and if you want to, since  
6 Steve is here we can go into the details. But I'll leave it at  
7 the mercy of -- or the discretion of the committee.

8 COMMITTEE MEMBER BAHADORI: Just one question. Since  
9 you are working with the national much closer, and maybe Mr.  
10 Fisher has some input into this also since his work is on the  
11 national committee, in the age of electronics where everybody  
12 is now moving to using the manual on the iPad and on the laptop  
13 and stuff like that, is it really an important question to  
14 decide how many volumes it's going to be when people are not  
15 really using the hard copy volume anymore?

16 MR. BHULLAR: Well, the issue is not as simple as  
17 that -- the issue actually stems more from the changes that are  
18 made to the manual going through a federal register, and that's  
19 a very laborious procedure. And also the shalls in the manual  
20 all strongly, and that's what we were discussing earlier, as  
21 well, is should they be lowered to shoulds in some cases, or  
22 the feds just split the document. The one that contains the  
23 shall, about 30 percent of the manual, will become the manual.  
24 The other one is like a guideline, and just like an IT  
25 guideline and everyone can either use it or not. Those are the



1 ways they're looking at it.

2 COMMITTEE MEMBER BAHADORI: So the issue is --

3 MR. BHULLAR: Not the volume of the book.

4 COMMITTEE MEMBER BAHADORI: So the issue is just  
5 getting rid of a lot of superfluous stuff that the document is  
6 full of it. It's a lot of stuff. Like I remember, like on the  
7 flag man it says which hand he can hold a flag, which hand he  
8 should hold the flashlight. I mean, we have a standard that's  
9 that ridiculous. I agree that a lot of it is garbage and has  
10 to go out. But so that their idea is to shrink the content,  
11 not actually --

12 MR. BHULLAR: Well, no, it's not shrinking the  
13 contents. It's splitting it so that only the law or the  
14 regulation applies to the critical elements. The others, there  
15 is no flexibility. So it's not so clear as to who will be the  
16 owners of the guideline or application supplement, like they  
17 want to call it, and what will be the legally or otherwise  
18 requirement for agencies to follow it.

19 And this is very similar to what we have as -- ITE  
20 has a traffic control device handbook. And the reason why  
21 they're credited was when the millennium addition of the MUTCD  
22 came out, that was the first time the feds used to (inaudible)  
23 two documents, the MUTCD and the handbook. And after '88 we  
24 stopped doing it because of the effort involved in expanding  
25 the manual. Well, in 2000 they did not come out with the

1 handbook, so ITE stepped in and they created the handbook, and  
2 that contains a lot of procedures like how to do traffic counts  
3 and how to use signal warnings which are not discussed in the  
4 manual.

5           So in this case what's happening is now they're  
6 trying to have that material (inaudible) to words, that  
7 handbook, so that it's more for a handbook or a guideline, take  
8 it or leave it, use it or not. They want to only focus on the  
9 standard of the shalls and the few shoulds where they think  
10 it's critical. And that way it's easier for them because it's  
11 a small manual that has to go to the federal registry. And in  
12 a way I'm just trying to simply -- I'll say simplify a very  
13 complex document.

14           COMMITTEE MEMBER KNOWLES: So has Caltrans made a  
15 recommendation, or what is their input to the fed's spin?

16           MR. BHULLAR: Okay. The recommendation from AASHTO,  
17 which we are a member of, and I was just going through a number  
18 of DOTs, as well as comments from Caltrans are pretty much the  
19 same. And all of them are that the National Committee on  
20 Uniform Traffic Control Devices had started working on an  
21 effort similar to this. And what they had to start looking at  
22 was all the shalls in the manual, are they really needed? Are  
23 there reasons to keep them or to lower them?

24           And all the subcommittees on the national -- at the  
25 national committee, they have started working on that and most

1 of them are even like close to completing their process there.  
2 However, the comments from -- I would say ATSA and a lot of our  
3 other locations, as well as DOTs, is we would rather have that  
4 process that has started, let it continue and dictate which way  
5 or what manner we go. And that has been -- our comment has  
6 been that we do not agree with this splitting of the manual the  
7 way the feds want to do it. And we would rather let the  
8 process that has begun indicate, and then we can decide.

9 COMMITTEE MEMBER KNOWLES: And is your primary reason  
10 for not wanting to split it because you'd hate to have to do  
11 dual searches on the same subject to try to find out what the  
12 guidelines are and what the recommended options are?

13 MR. BHULLAR: Well, there are a few reasons. One of  
14 them, of course, is that once you have two documents, and in  
15 our state we had the MUTCD 2003 National Addition, and the  
16 supplement, trying to reconcile it was a nightmare. So we have  
17 already gone through that experience and we don't want that  
18 here.

19 Secondly, the -- I would say the bigger issue is as  
20 soon as you make the shalls as 20 percent of the manual as the  
21 requirement, the other 80 percent of the manual, once it's not  
22 a requirement, if you're a DOT or a county in another state  
23 versus us, everyone can use whatever. And what's going to  
24 happen is over time the credibility of that portion is going to  
25 go away. There's no legal requirement.

1           And actually (inaudible) is even indicating that they  
2 don't -- aren't -- they're not saying that we are even going to  
3 maintain that, which will be the entity maintaining the shoulds  
4 and the mayas that are in the manual. So all of a sudden the  
5 authority is gone. You're going to lose uniformity because  
6 agencies will be falling all over the shalls. And with the  
7 shalls, that's an incomplete manual. Because when you look at  
8 that, that portion of the manual, you can not really take it  
9 and try to use it in the field. We need to have the other  
10 elements to explain, you know, the placement criterias and  
11 other issues that could make it really useful.

12           COMMITTEE MEMBER BAHADORI: Can I ask a similar  
13 question? If that's the objective to minimize the work through  
14 Federal Register, why don't they say that from here on we only  
15 modify shall statements? Why don't they just categorically  
16 don't accept any comment on should or options and just say from  
17 here on FHWA is only concerned about the shall statements. And  
18 they only modify those shall statements through our committee  
19 process. That minimizes the Federal Register number of inputs  
20 or whatever.

21           MR. BHULLAR: Well, I can not speak on their behalf.  
22 But FHWA is present. Steve Pyburn is here, and the notes of  
23 John Fisher from the National Committee, if they can offer any  
24 more details. Because the more I will answer the deeper I will  
25 get into some of these complexities, and I don't want to do

1 that.

2 MR. FISHER: John Fisher. I think there are more  
3 questions than answers. I think what the requests for comments  
4 that the feds put out, they're just asking how can we separate  
5 the manual. They're asking how best to do it; not whether to  
6 do it but how best to do it. And the National Committee on  
7 Uniform Traffic Control Devices sent a letter indicating they  
8 were against separating the manual at this time because there  
9 were two many unanswered questions. And they were concerned  
10 with having to look at two sets of manuals, even if you can do  
11 it electronically.

12 But let's say if you want to install a marked  
13 crosswalk you would look under the marking section currently  
14 and under the signing section. But now you're effort is  
15 complicated if you have to look at the should statements here  
16 and -- I'm sorry, the shall statements and the should  
17 statements that are considered to be critical to safety,  
18 whatever that means, here. But other should statements over  
19 here in this document that aren't critical to safety, whatever  
20 that means, and options and support statements over here, now  
21 you've got two different documents to try to look at. So  
22 that's one of the issues.

23 Comments were due on March the 12th, just last week.  
24 And a number of comments were sent to the docket. I submitted  
25 one that was ten pages long. But, yeah, I think there are more

1 questions than answers at this point. It appears that the feds  
2 want to reduce their workload by just dealing with the shall  
3 statements primarily. And it leaves open the question then,  
4 who owns the other statements, the recommendations, the should  
5 statements, recommended practice. If that doesn't have the  
6 backing of the feds, what legal backing does it have? Are  
7 states required to follow it? Will states drift their own  
8 ways, some including the should statements, some not? It's a  
9 real open question at this point in time.

10 COMMITTEE MEMBER BAHADORI: Thank you, John.

11 CHAIR ROBINSON: Okay. Thank you. Next item, it's a  
12 very important next item, our next meeting. I understand  
13 that -- well, we've got three dates here, July 11th, 18th or  
14 25th. I would like to steer clear of the 18th. So I'd like to  
15 consider either the 11th or the 25th, whatever is the pleasure  
16 of the committee. The 11th?

17 COMMITTEE MEMBER BENTON: The 25th works better for  
18 me.

19 COMMITTEE MEMBER JONES: When?

20 COMMITTEE MEMBER MARSHALL: July.

21 CHAIR ROBINSON: 11th or 25th?

22 COMMITTEE MEMBER BAHADORI: It's too far out.

23 CHAIR ROBINSON: We're not asking you, Jeff.

24 COMMITTEE MEMBER BAHADORI: It's too far out.

25 COMMITTEE MEMBER MARSHALL: They're both fine for me.

1 CHAIR ROBINSON: Either one?

2 COMMITTEE MEMBER BENTON: Later is better for me.

3 CHAIR ROBINSON: Later is better?

4 COMMITTEE MEMBER JONES: We won't be messing with

5 March Madness then either.

6 CHAIR ROBINSON: The 25th is better? Emma, I think

7 you're outvoted there.

8 COMMITTEE MEMBER OLENBERGER: That's all right.

9 CHAIR ROBINSON: I think we're going to go with the

10 25th then. And, Devinder, you're going to try to get Oakland;

11 is that right?

12 SECRETARY SINGH: Yeah, I'm looking to have Oakland.

13 So we'll see. So we'll see --

14 CHAIR ROBINSON: We'll be checking on that

15 experiment.

16 SECRETARY SINGH: -- where we can find a facility.

17 CHAIR ROBINSON: Okay. Now that we've got that all

18 settled, the only thing we've got left is adjournment. I'll

19 call the meeting adjourned. Thank you.

20 (Thereupon the California Traffic Control

21 Devices Committee Adjourned at 12:55 p.m.)

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TRANSCRIBER'S CERTIFICATE

I, Martha L. Nelson, attest that the foregoing proceedings were transcribed to the best of my ability.

I further certify that I am not a relative or employee of any attorney of the parties, nor financially interested in the action.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Dated this 21st day of March, 2013.

          /s/ Martha L. Nelson